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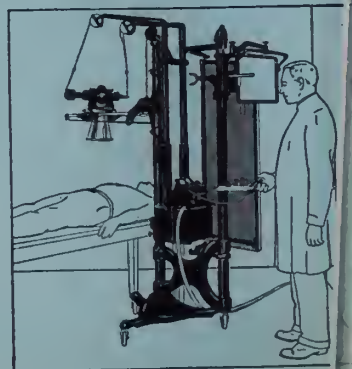
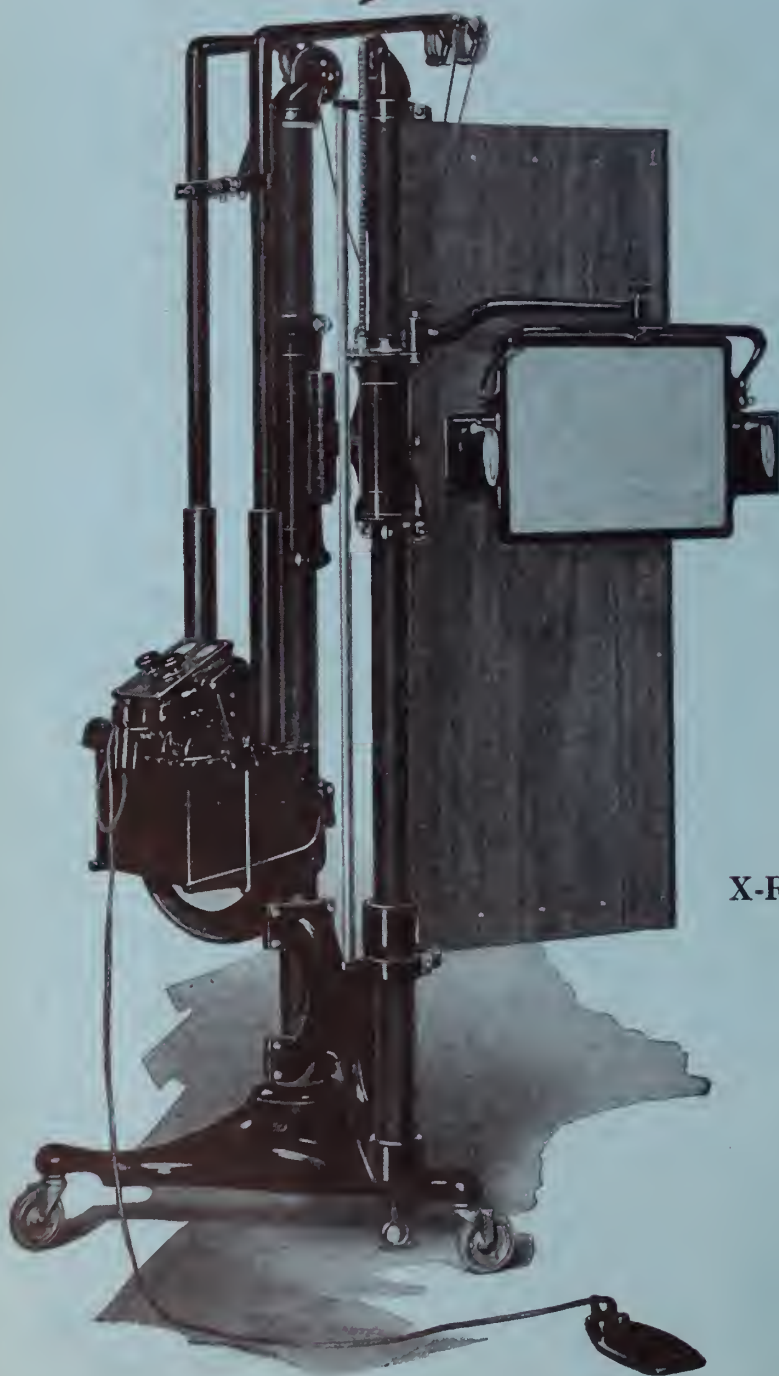
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2 teaspoons Knox Sparkling Gelatine	4.5	4
¼ cup cold water
¼ cup hot water
1 teaspoon salt
¼ cup vinegar	....	....	....	....	....
1½ cups grated cheese	150	43	54	....	....
½ cup chopped stuffed olives	70	1	19	8	....
½ cup chopped celery	60	1	....	2	....
¼ cup chopped green pepper	25	....	....	1	....
½ cup cream, whipped	75	2	30	2	....
Total	51	103	13	1183	
One serving	8.5	17	2	197	

Soak gelatine in cold water. Bring water and salt to boil and dissolve gelatine in it. Add vinegar and set aside to chill. When nearly set, heat until frothy, fold in cheese, olives, celery, pepper and whipped cream. Turn into molds and chill until firm. Unmold on lettuce leaf and serve.

SPINACH SALAD (Six Servings)

	Grams	Prot.	Fat	Carb.	Cal.
1½ tablespoons Knox Sparkling Gelatine	10	9	....	....	....
¼ cup cold water	....	....	....	....	....
1½ cups boiling water	....	....	....	....	....
2 tablespoons lemon juice	20	....	....	2	....
½ teaspoon salt	....	....	....	....	....
1½ cups cooked spinach, chopped	300	6	....	7	....
2 hard cooked eggs	100	13	10.5	....	....
Total	28	10.5	9	242.5	
One serving	5	2	1.5	40	

Soak gelatine in cold water and dissolve in boiling water. Add lemon juice, salt, strain and chill. When nearly set, stir in chopped spinach, mold and chill until firm. Serve on lettuce hearts or tender chicory leaves and garnish with hard cooked egg, cut lengthwise in sixths and sprinkled with paprika. Serve with mayonnaise.

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PUBLISHED MONTHLY

Volume XVII

Jacksonville, Florida, July, 1930

Number 1

AURICULAR FIBRILLATION*

SPENCER A. FOLSOM, M.D.,

Orlando.

*"Ignorance is the night of the mind,
but a night without moon or star."*

—Confucius.

About three decades ago, the night of the mind really existed for those indomitable searchers who falteringly and hesitatingly groped in the darkness of ignorance for the light of knowledge. The light was elusive, but was found after careful, patient, painstaking effort. It burns today, but not as brightly as we would have it because the darkness approaches too closely the circle of its illumination. We still need more light.

I cannot repress my envy of the men who have been so fortunate as to have lived and practiced all these years and seen the wonderful and surprising changes of thought take place with kaleidoscopic rapidity. This irregularity of the heart's action held a fascinating interest for them, and it was with a full measure of satisfaction, such as we younger men can hardly appreciate, that they saw the mystery solved and cosmos brought out of chaos. It hardly matters whether we call this condition a clinical entity or a symptom-complex. I should judge that it is entirely correct to call it either or both.

The first work on this subject was done by Mackenzie in the year 1890 when he studied the irregularity of the pulse. Previous to 1890 he began using the jugular as well as the radial tracings in the study of the heart's action. I might mention, at this juncture, that Riegel, for instance, had made such observations previously but Mackenzie was the first to use the method systematically.

Mackenzie, in studying cardiac irregularities, tried to separate the great majority of them into groups and conceived the idea that records of the jugular vein might give light on the significance of these cardiac irregularities. There are three waves of the normal jugular pulse obtained by

the polygraph. These waves are the a, c, and v. The a wave is due to contraction of the auricle. There is some difference of opinion as to the causation of the c wave but Mackenzie believes it possibly due to closure of the semilunar valves. Whatever the actual causation, it occurs during the contraction of the ventricle. To summarize, the a wave is due to contraction of the auricle; the c wave to the contraction of the ventricle; the interval, that is, the a to c interval, is one-fifth of a second. The v wave we believe to be due to the closure of the tricuspid valve plus stasis.

Mackenzie found that in 60 to 70 per cent of the cases of irregularity that the a wave was absent. He called such a venous tracing the ventricular form of venous pulse because he thought the auricle and ventricle contracted simultaneously. The idea was that the auricular contraction disappeared and only the ventricular contraction took place. This form of irregularity, with absence of the a wave in the jugular tracing, was called the "nodal rhythm."

In the year 1902 Mackenzie published a very unusual and remarkable book entitled "Study of the Pulse." This work stirred the world of medicine. However, before the appearance of the book definite progress had been made in the differentiation of the cardiac irregularities. Nearly all the important facts relative to heart-block had been worked out and the extra-systolic arrhythmias were fully understood. This curious irregularity, however, remained shrouded in mystery and obscurity.

In 1903 Einthoven published his epoch-making discovery of an unusually delicate galvanometer. With this instrument, by suspending a very delicate thread of silvered quartz in a magnetic field he was able to register accurately deflections caused by the very faintest electric current. Clinical reports obtained by using this machine appeared in the literature in 1907.

The use of the electrocardiograph in clinical work in the irregularities of the heart brought to light their mechanism of production. Previous to this they were recognized clinically, but here knowledge stopped.

*Read before the 57th Annual Meeting of the Florida Medical Association, Pensacola, May 6, 7, 1930.

Since auricular fibrillation was not known the clinicians were wont to give vent to various fanciful names to the disordered irregular pulse. Thus into medical writing came "the absolutely irregular pulse," "the pulsus arrhythmicus," "the mitral pulse," "pulsus irregularis perpetuus," "completely disordered pulse," the "P-I-P" pulse, "the grossly irregular pulse," "perpetual arrhythmia," "delirium cordis," etc. The word perpetual, as oft-repeated in the various terms given to the irregularity is significant. It was believed then that the irregularity was really perpetual. In a way they were correct but recent knowledge also shows that they were more incorrect.

Lewis, in London, 1909¹, and Rothberger and Winterberg in Vienna, showed conclusively with the electrocardiograph that the mysterious irregularity of the heart was caused by fibrillation or trembling of the auricles. Previous to this the possibility had been suggested by Cushny, 1906², Mackenzie³, Wenckebach⁴, and Herring. Thus the erroneous "nodal rhythm" as described by Mackenzie in his jugular tracings was found by Lewis, with the aid of the electrocardiograph, to be auricular fibrillation.

The familiar saying in medicine, so well known to all clinicians, "Know syphilis in all its manifestations and you know medicine," might very appropriately be applied to this irregularity because if one knows auricular fibrillation and knows it well he knows the arrhythmias.

The great frequency of its occurrence renders it imperative that all of us should become very familiar with it; for 60 to 70 per cent of all cases of serious heart failure met with in practice owe the failure directly to this condition, or have the failure aggravated by its presence.⁵ When we recognize the various signs and symptoms, they afford us grounds for a sure diagnosis, a safe prognosis, and for a rational line of therapy in a large proportion of cases of cardiac insufficiency.

What is auricular fibrillation? The exact condition bringing about this symptom and sign complex is shown by the electrocardiogram to be mainly in the auricle. The auricular muscle fibers cease to contract rhythmically in response to the contraction impulses which come to them from the sino-auricular node, the pace-maker of the heart. Contractions of individual auricular fibers occur, but each fiber contracts at its rhythm independently of the other fibers. This results in a momentary contractile movement in one part of the auricle, neutralized by a momentary diastole

in other parts of the organ. The net result of this disorder is a distended, dilated auricle standing in trembling diastole.

The disturbance in the organ is due to myocardial degeneration(?) and to what has been called a "circus impulse." A normal contraction impulse is sent into the auricle by the sino-auricular node. Instead of being conducted in an orderly manner through the walls of the auricle to the auricular-ventricular node (junctional tissue), the impulse is diverted from its normal course by degeneration within the auricular walls, which block the normal impulse paths. The contraction impulses circulate in the auricular walls, being shunted here and there, and in an irregular manner are picked up by the auricular-ventricular node, which conveys the impulse to the bundle of His, which passes the impulse on to the ventricles. The ventricles are incited to irregular tumultuous activity. What is the result of the abnormal ventricular activity upon the systemic circulation? Some of the ventricular contractions are so weak that they cannot open the aortic valves and therefore cannot produce corresponding pulse waves in the radials. Another reason for the non-opening of the aortic valves may be that the ventricular systoles, otherwise sufficiently strong, do not properly direct the blood toward the aortic valves. In either case it is apparent that there will be more heart-beats than pulse-beats. The stronger ventricular systoles open the aortic valves in the usual fashion and produce correspondingly strong pulse beats. But since even these effective ventricular systoles vary in force and rhythm there is a corresponding variation in the propagated arterial waves as shown by a pulse which is also irregular in force and rhythm. Why do patients with auricular fibrillation so frequently decompensate? The reason depends primarily on the resultant irregular ventricular activity. When the latter is present the myocardium becomes exhausted by the persistent rapid rate and the blood cannot be thrown into the systemic circulation in an orderly fashion.⁶

In auricular fibrillation the degree of functional A-V block influences both the clinical picture and the treatment. The greater the block, the slower the ventricular rate.

Some of the conditions inducing auricular fibrillation are well known to every one, others are obscure, indefinite and indeterminable. Unusual etiologic factors are being reported often in the literature.

Experimentally, fibrillation of the auricles can be produced by stimulation of the vagus, stimulation of the sympathetic, direct faradization of the auricles and injection of thyroid extract intravenously. (One experiment.)

Clinically, it is seen most frequently in rheumatic endocarditis with the valvular lesion of mitral stenosis. Lewis well states that auricular fibrillation and mitral stenosis are "bosom companions." Uncomplicated aortic insufficiency very rarely co-exists with auricular fibrillation.⁷ Next in frequency is cardiosclerosis, which is a generic term including gross pathologic changes in all the cardiac structure, valves, endocardium, myocardium, aorta and coronaries. Hypertension or cardiac insufficiency may or may not be present. Lastly, is the so-called extra-cardiac group which is smallest in number.

Some make bold to state that auricular fibrillation cannot exist without an affected myocardium. They doubt the existence of auricular fibrillation occurring in a normal heart. This is a question that is undecided at the present time.

Approximately 66 per cent of all fibrillators belong to the so-called rheumatic group which is preponderantly composed of women 15 to 40 years of age and usually in women suffering from mitral stenosis. (Fifty-two per cent.)

The non-rheumatic group is most frequent in men 45 to 70 years of age.⁸ This is the cardiosclerosis group. In both of these groups the fibrillation is usually more or less permanent.

Auricular fibrillation is no respecter of age. Resnik and Scott have recently reported the youngest case of auricular fibrillation on record, aged four years. Previously four children of ten years or less with this affection had been reported.

The extra-cardiac causes in patients with normal and abnormal hearts may be listed as follows: in many of the acute infections such as pneumonia, diphtheria, typhoid, paratyphoid, severe tonsillitis, acute cholecystitis, acute appendicitis, scarlet fever, acute endocarditis and acute pericarditis. Fibrillation is usually transient in these infections.

Felberbaum and Finesilver have reported the occurrence of transient fibrillation in six cases of abdominal disease, in three at the time of gallstone attacks, in one associated with gastric ulcer symptoms and signs, and one with acute appendicitis relieved by operation and in one associated with extensive post-operative adhesions.⁹

Tobacco, alcohol, digitalis, coffee and sulphur-

ated hydrogen can cause auricular fibrillation. Canby Robinson cites a case of his own that seems to afford evidence that auricular fibrillation may be set up in a healthy man by means of a wholly extra-cardiac factor. This case was a man overcome with the fumes of hydrogen sulphide. Recovered in three hours from the fibrillation. Left the hospital in three days. Reported later as well in every way.¹⁰ Reid reports a case of auricular fibrillation which persisted for two years and eight months. No return of fibrillation since its disappearance ten months ago.¹¹ Digitalis can and does induce auricular fibrillation in predisposed cases or the fibrillation is brought on by toxic amounts of digitalis in association with other signs of digitalis poisoning. Mackenzie states that the digitalis may induce the fibrillation in cases of cardiac decompensation with slow heart rates.

Occurring in the course of surgical anesthesia or following shortly after surgical operations we sometimes have a transient form of fibrillation. In thyroid disease the condition occurs with about equal frequency in both adenoma and hyperthyroidism. Here the fibrillation occurs permanently or in paroxysmal attacks. It is well that an over-junctioning thyroid be ruled out as a cause in every case of paroxysmal fibrillation of the auricles.

Other etiologic factors that are mentioned are fright, fear, trauma, excitement and effort. Hays and Jones have recorded five cases of auricular fibrillation trauma, in one case a powerful electric shock and in the other four sudden unexpected physical strain. In all but one of the cases the hearts were apparently normal.¹²

Lastly, we must mention the attacks of so-called paroxysmal fibrillation of unknown origin either in men or women, probably heralding the onset of temporary or permanent heart muscle failure; often associated with paroxysmal dyspnea, periodic vertigo and nausea, attacks usually disappearing promptly with rest in bed; often resulting (as many believe), after many recurrences, in permanent fibrillation.¹³

The pathology of the condition is not understood as no distinctive lesion or lesions have been found. What brings the fibrillation on and what are the pathologic changes in the auricular muscle? Both of these questions have not been answered satisfactorily.

Two general possibilities are admitted in regard to the first question. First, that there is some

pathologic change in the muscle fiber of the atria which renders them prone to fibrillate so that some sudden strain or the cumulative effect of the prolonged overwork, such as might occur in valvular disease, is sufficient to initiate the process. The second possibility is that some extrinsic stimulus, such as an alteration of the blood supply to the atria or a change in the chemical composition of the blood itself, would, if sufficiently marked, cause fibrillation in a previously healthy heart and still more readily in one already diseased. Canby Robinson points out that clinical experience is in favor of the first possibility because auricular fibrillation usually occurs in patients with cardiac lesions that are clinically demonstrable, especially with such lesions as throw an extra strain upon the atrium. Nevertheless, cases have been observed in which fibrillation took place in apparently healthy hearts as has been already mentioned. Mackenzie states: "In the hearts which I have examined, which showed auricular fibrillation during life there has been found in the auricle and ventricle, an increase of fibrous tissue and of nucleated cells in the muscular walls. . . . At present, we can only say that one predisposing condition is certain organic changes in the muscle walls of the auricle."¹⁴

Frothingham reports a study of 11 cases of auricular fibrillation and 23 cases with normal rhythm, at post-mortem examination, with especial reference to auricular pathology. No typical lesion was found. There were slight degenerative changes in the muscle fibers of the auricle in fibrillating cases more often than in cases with normal rhythm.¹⁵

Neuhof mentions as some abnormal factors found in or productive of auricular fibrillation in the human heart the following: enlarged and dilated auricles, pathologic changes in the pace-maker (sino-auricular node), and changes in the nerve tone in the pace-maker from destruction of nerves, fibrils and ganglia and from abnormal impulses reaching the pace-maker.¹⁶

At the present time our true knowledge of the pathology of auricular fibrillation is very deficient. We tentatively say that a fibrillation in this or that condition is permanent, transient or paroxysmal, but we do not know why. The fibrillation may occur abruptly once and become permanent. More frequently, however, it occurs and disappears, then recurs and recurs, and finally becomes permanent.

Miller has brought out the fact that if the car-

diac rhythm is altered to produce auricular fibrillation sub-acute bacterial endocarditis does not occur, despite the fact that the patient may have had for a long time a heart damaged and made vulnerable by rheumatism, syphilis, arteriosclerosis or hyperthyroidism. This strange observation has been corroborated by many clinicians. It is, therefore, pertinent to state that a negative blood culture is the rule in almost any situation where an auricular fibrillation appears.

We do not know if the blood develops any specific bactericidal properties or whether organisms cannot remain in the circulation because of a faulty mechanical pump, or whether subacute bacterial endocarditis in some peculiar form, for example, does not occur here after all, but stays undetected.¹⁷

It is important to be able to interpret the symptoms and signs of auricular fibrillation because of its predominating frequency compared to the other arrhythmias. Also, it is easier to grasp and comprehend the other irregularities if this is understood. Another reason is that it is the one arrhythmia which may be benefited most often therapeutically.

Symptomatically, auricular fibrillation may be latent, or similar to other cardiac affections. Although rapid pulse is most frequently complained of we must not lose sight of the fact that a slow pulse may be present. Again a regular ventricular rhythm may be present.¹⁸ There are two types of patients present themselves for diagnosis, first, those with good compensation who may complain of rapid pulse, palpitation and dyspnea. They will describe the palpitation as a "thumping of the heart" due to the irregularity. The second and most common type is the one with broken compensation who presents himself complaining of dyspnea, precordial pain, palpitation, cough, etc., and has the objective signs of cyanosis, edema of the feet and ankles, etc. Some patients complain of gastric distress, a sense of fullness, bloating and of tightness, which is apt to focus the attention both of the physician and the patient upon the stomach rather than upon the heart. In every middle-aged patient complaining of gastric symptoms, especially if there is dyspnea, one should think of the heart.

The differentiation and recognition of auricular fibrillation can usually be made at the bedside by a study of the pulse, the apex beat and the influence of the heart rate on the irregularity. When possible the graphic method, such as the

electrocardiograph, should be used to verify the diagnosis.

Auricular fibrillation is distinguished from all other forms of irregularity by an entire absence of rhythm. It is extremely disorderly in character. The unequal spacing and force of the beats is best appreciated in taking the blood pressure.

As a general statement, it may be said that any irregular pulse of one hundred and twenty or more is almost always auricular fibrillation. Especially is this true if a cardiac insufficiency co-exists. A slow heart with irregular action may sometimes be met with in auricular fibrillation, but it may also be due to the presence of extra-systoles or to a partial heart block. The exercise test or an electrocardiogram will make this clear.

Sometimes in a sinus arrhythmia there is a total irregularity but the rhythm is said to be regular as the rate is increased.

Flutter may present an apparently total irregularity although Lewis has shown that measurements of grouped beats, so-called spacing, show an element of regularity. With a rate over one hundred this and extra-systoles with partial heart block are practically the only conditions that simulate fibrillation.

It is important to remember that an increase of pulse-rate tends to abolish extra-systoles and sinus arrhythmias, whereas in fibrillation the irregularity is not abolished but is usually increased and the simulation of a dominant rhythm disappears.

In every case of cardiac arrhythmia the radial pulse and apex beat should be studied together. In auricular fibrillation there is a constant disproportion in the rates of the two, called the pulse deficit, as before described.

Where a mitral stenosis is present the presence of auricular fibrillation causes the rough crescendo presystolic murmur to be replaced by a long diastolic decrescendo murmur. Sometimes the presystolic murmur disappears entirely.

The prognosis of auricular fibrillation depends entirely on the integrity of the myocardium. The time of occurrence of the fibrillation is of some importance. An acute attack may occur and subsequently disappear, never to return, or it may be simply the first attack with many subsequent recurrences. It is the rule that it tends to recur many times, finally in long, severe cases becoming permanent. Expectancy of life can be based on two points, first, the response to treatment, and second, response to effort, that is, testing out by

proper methods the heart muscle sufficiency before treatment has been instituted. How much unimpaired heart muscle is left possessing the ability to respond to proper medicinal and hygienic treatment? No safe opinion can be given until the patient has had the benefit of proper and prolonged treatment. Auricular fibrillation is no absolute indication of the condition of the heart muscle. A patient with a completely disordered rhythm may be able to perform the work and duties of his life without any definite evidence of beginning heart muscle failure. In such an event the prognosis would be favorable. On the other hand if he cannot perform the ordinary tests of life without signs and symptoms of cardiac impairment, the prognosis is relatively bad.

Even though the myocardium should be intact the onset of the irregularity is usually of serious import and may be a permanent disturbance of the auricle. In other words, the appearance of a fibrillation adds gravity to the prognosis if an organic heart lesion is present; failure being bound to eventually come. Auricular fibrillation, however, does not enable us to be any more accurate in our prognosis as to the duration of life and we should be careful in making absolutely bad prognosis. Lewis¹⁹ states that "it loads an already defective muscle with an extra and appreciable burden. In most cases it heralds cardiac failure, temporary or terminal, so that few patients survive its onset for more than ten years." Osler²⁰ states "the condition may last for many years when once established . . . An unduly grave view must not, therefore, be taken unless there is marked evidence of cardiac failure." Mackenzie²¹ adds "there are many individuals with fibrillation who lead useful and energetic lives, and whose capacity for work is little if at all impaired by the rhythm. In such the prognosis is distinctly good." Pardee²² emphasized the necessity of continued treatment and concludes that the irregularity itself adds little or nothing to the gravity of the prognosis of the individual. Musser²³ reports a case of twenty years' duration and at no time did the heart muscle show evidence of an insufficiency. F. A. Willius analyzing the results in five hundred cases of fibrillation concludes that the mortality attending auricular fibrillation doubles and in some instances triples that occurring in similar types of heart disease not complicated by this arrhythmia. Jones²⁴ in discussing the prognosis of a fibrillation has said that the senile

type is more serious than the rheumatic, that auricular fibrillation makes little difference so far as longevity is concerned in mitral stenosis, that this arrhythmia improves the prognosis in aortic regurgitation, that marked cardiac enlargement is an important handicap, that females do better than males, and that abnormal Q-R-S complex of the electrocardiogram is a serious sign.

In the treatment of auricular fibrillation quinidine should not supplant digitalis but at times be used as a supplement. In any case of fibrillation the question which presents itself is whether to give digitalis or quinidine.

The following criteria²⁵ for selection of cases most likely to be benefited by quinidine will be found useful:

1. A good myocardium, that is with little or no cardiac hypertrophy.
2. Little or no signs of heart failure, or in which the symptoms of heart failure clear up promptly after treatment is instituted.
3. Where fibrillation is of recent onset and especially if of short duration.
4. Where there is no serious valvular damage to the heart.
5. Not to be used in cases of thyrotoxic origin.
6. Not to be used in cases where the causative factor is of a somewhat similar active agent, as in rheumatism, in rare cases of malaria. (Eliminate first the causative factor.)
7. Can be used to an advantage in fibrillation following the poisons and infections.

White is of the opinion that any chronic fibrillation of one year or more standing is a contra-indication to the use of quinidine, because:

1. Any return to normal rhythm is of short duration.
2. The danger of embolism, arising from a clot formed in the auricle during fibrillation, is increased.
3. Respiratory paralysis is more likely.
4. Sudden death has resulted, the cause of which is unknown, but possibly due to ventricular fibrillation.

Quinidine is a protoplasmic poison and acts by increasing the refractory period of the auricular muscle and decreases its irritability and conductivity. Its action is both upon the auricular muscle and through the vagus. In ordinary doses the heart is slowed and the auriculo-ventricular conduction time is lengthened. We should remember that the patient must be compensating

with rest, morphia, digitalis, etc., before quinidine is ever given.

Untoward symptoms of quinidine administration are: headache, vertigo, nausea, vomiting, urticarial rash, convulsions, palpitation and faintness. In most cases the pulse increases in rapidity before the normal rhythm is restored. Toxic effects may appear after the establishment of a normal rhythm. The drug should be immediately stopped in any case where toxic symptoms appear. The onset of frequently extra-systoles or a persistently high ventricular rate affords an indication for cessation of therapy also.

The drug is rapidly eliminated and it appears that no cumulative effects take place. So far as it is known, the drug has no permanent effect. Approximately fifty per cent of the cases of flutter and fibrillation have been restored to a normal rhythm which persists from any number of days to years.

The sulphate of quinidine is given in the powdered form. Each gelatin capsule should contain five grains. Preliminary doses of five and ten grains are given on the first and second day of treatment, respectively, to test for idiosyncrasy. It is then increased to fifteen, twenty, thirty and forty grains daily until a change, if any, in the rhythm occurs. The daily amount should be given in divided doses. When the normal rhythm is restored this is gradually reduced until five grains is taken twice or three times a day. This should be kept up an indefinite period of time.

A series of fifty-three cases treated in the last five years has recently been reported. Thirty-eight, or seventy-one and seven-tenths percent, returned to sinus rhythm. Of these twenty-five, or forty-seven and one-tenth percent, remained regular for one month or more, fifteen, or twenty-eight and two-tenths percent kept their sinus rhythm for at least six months, three for at least three years and one is still regular after five years.²⁶

In conclusion we should remember that the successful treatment of auricular fibrillation with the sulphate of quinidine depends on the proper observation and continuance of dosage even after the normal rhythm is restored.

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DISCUSSION

Dr. Caldwell, Lake City:

I was very much interested in Dr. Folsom's excellent paper, but was not aware until this moment that I was to be asked to discuss it.

Recently I saw a fresh specimen of a heart; the patient having had for a long time auricular fibrillation. This heart contained in one of the auricles a thrombus of about 4 cm. in diameter, and this clot had adhering to it a number of crumbling portions. These could easily separate off and float out in the blood stream.

I do believe that where we have an enlarged heart with long standing fibrillation it is dangerous to use quinidine.

From a diagnostic standpoint, I am very much interested in the electrocardiograph. In flutter we know that the auricular beat is pronounced in all leads in the electrocardiogram, but in fibrillation we frequently see many cycles in which there are no definite auricular beats visible. Again they appear nicely and again fade out. Just what happens I do not know. Perhaps, as Dr. Folsom says, "the heart trembling in diastole ceases to tremble rhythmically." White says of this matter, "it is almost certain that in auricular fibrillation there is a constant circus movement, but of course it is not a regular one or one that always follows a uniform path. Its irregular course and probable conflicts due to some areas of block account for the small irregular oscillations in the electrocardiograms in auricular fibrillation."

At present I am treating one case of auricular fibrillation with digitalis and quinidine combined. I am glad Dr. Folsom mentioned that method in his paper. I used originally small doses of quinidine fourth day and night, never exceeding twenty-four grains in twenty-four hours, but recently, in one case, we gave as high as ninety grains in twenty-four hours before the rhythm became regular.

Dr. W. C. Blake, Tampa

(Note—This discussion was read by Dr. Spiers for Dr. Blake.)

We are greatly indebted to Dr. Folsom for the direct and clear-cut treatment of his subject.

That the condition he presents is frequent is evidenced by the fact that in about fifty percent of patients admitted to hospitals with advanced cardiac decompensation, auricular fibrillation is present. I know of nothing that is a greater test of one's diagnostic acumen than the ability to differentiate the cardiac arrhythmias. As has been said, "know auricular fibrillation and you know the arrhythmias." He who can sit by the bedside and correlate the heart rhythm, pulse rate and jugular pulse must be a keen observer. Mackenzie has given us one of the most graphic and inspiring examples of this painstaking and meticulous observation in modern medicine—the country practitioner who arrived at great truths by the careful correlation of the heart sounds and the visible or palpable pulsations of the circulatory apparatus. Not every case of arrhythmia can be differentiated without the electrocardiogram, but every effort should be made to arrive at a definite conclusion before the tracings are studied.

Auricular fibrillation almost invariably has as its background some profound degenerative cardiac lesion. While it at times occurs as a result of some acute intoxication, usually one attack is the forerunner of other attacks. It is therefore important after the attack has passed that a careful survey be made of the circulatory apparatus, especially the myocardial reserve. In this way the patient's activities and mode of living can frequently be so regulated as to prevent recurrence.

Quinidine sulphate is a decidedly helpful drug in both auricular flutter and fibrillation. It should be distinctly borne in mind, however, that it is an adjunct to, and not a substitute for, digitalis. In addition to depressing the vagus it acts directly on the heart muscle to slow conduction and to lengthen the refractory period. The contractile power of the heart muscle is at times so depressed as to increase decompensation. For this reason it should not be given in the face of severe decompensation.

Dr. M. J. Flipse, Miami:

I do not agree with one of the previous speakers, particularly as to the dosage he mentioned. There are a number of cases of auricular fibrillation that cannot tolerate large doses, and will get bad symptoms from them. There is a certain type of individual who will begin to show symptoms of intoxication when the dose is over 15 grs. It has also been my observation that the patient who is going to be benefited by quinidine will ordinarily be benefited following the primary large dose, the continued dosage should not exceed 6 to 10 grs. a day.

I am rising merely because I know there are some general practitioners in this meeting, and I would like to have you bear in mind the fact that quinidine is a dangerous drug. I do not believe that the toxic effect of quinidine on the heart muscle is the primary danger—but the indiscriminate use of quinidine in cases of auricular fibrillation of long duration. I do not think that they will receive any permanent benefit, and it is in these cases that we usually see the bad effects.

The opinion as to administering quinidine with or without digitalis: It will operate in both instances, but smaller doses of quinidine will operate if digitalis is not given, primarily because digitalis prolongs the interval between the auricular and ventricular contractions, and, in the prolongation of this interval, induces fibrillation in a person who is susceptible.

The more recent papers that I have read on this subject would advise the administration of quinidine every other day unless the dosage of quinidine which produces the effect is small. It not infrequently occurs that after the administration of a single 3 gr. tablet of quinidine, the patient who has been fibrillating for several days will stop fibrillating. That is the ideal type. But, when a patient comes in who has been fibrillating for three or four years it is, in my opinion, useless to give him quinidine.

I think if the general practitioner would commence the use of quinidine in 3 gr. dosage three or four times a day, as soon as fibrillation occurs, it would oftentimes re-establish a normal heart rate. The continued use when necessary of 6 to 10 grs. a day of quinidine might maintain rhythm—and we would then see fewer cases of fibrillation of long duration.

Dr. M. J. Myres, Daytona Beach:

I would like to add the following cause to the etiology of fibrillation mentioned in this interesting paper: While in charge of the Daytona Beach Boxing Club, I was greatly interested in examining the hearts of the men after a knockout. The effect of the knockout blow seems to bring on heart block, and this was followed by flutter and what seemed to be fibrillation.

INSOMNIA*

H. MASON SMITH, M. D.
Tampa.

Any definition of sleep, like a definition of life, is inadequate. Our lives consist of the alternating waking and sleeping states and in this way the matter of defining one is analogous to defining the other. However, the characteristics of sleep are rhythmicity, reversibility, suppression of responses to incoming stimuli and extinction of conscious activity associated with subconscious and somatic activity. Sleep is differentiated from stupor or coma by reversibility or wakefulness, from syncope or fainting by circulatory phenomena and evanescence.

Sleep is an avenue of escape from reality in some neuropathic individuals or a symbolic interpretation of the death wish; as in a case reported by Tucker¹ and it is probably on this characteristic that Washington Irving based his

*Read before the 57th Annual Meeting of the Florida Medical Association, Pensacola, May 6, 7, 1930.

story of Rip Van Winkle. Sleep as an instinct is analogous to the migration of the birds with the seasons or to hibernation in some lower animals.

Many theories have been advanced as to the cause of normal sleep; one was that the ganglionic cells of the brain retracted their dendrites which interrupted conduction and stopped the activity of the organ. This brought about sleep. Another interruption theory was advanced by Pukinje who thought that congestion in the basal ganglia blocked the corona radiata which run through them and brought about sleep. There were still other theories of this kind. It is not necessary in this discussion to do more than to state that all these theories of interruption are unsatisfactory and are of no value.

The idea of sleep as a conditioned reflex was advanced by Pavlov. This was the result of his experiments in conditioned reflexes on animals. The tendency of the animals to sleep as a response to conditioned stimuli was so great that his purpose was often defeated. A conditioned reflex is one excited by an indifferent stimulus through the mental association with the real stimulus; as the flow of gastric juices on hearing a bell which is associated with the giving of food.

Another group of theories as to the cause of sleep have their origin in the symptoms that are produced by sleep, such as cerebral anemia which does play an important part in producing sleep, but which does not explain the character of sleep and the periodicity of it.²

There have been numerous theories as to the cause of sleep which might be termed chemical theories, one of which is the asphyxiation of the brain due to carbon dioxide. Another is that the nerve cells have a changed appearance after exhaustion which is due to absorption of cell matter from them during the activities of the waking state.

The French physiologist, Pieron, took the blood serum of dogs that were over-exercised and had not been allowed to sleep for some time, and injected it into wakeful dogs which had had sufficient sleep. This produced prompt slumber on the injected dogs. Since this, it has been accepted that activity in the body during the waking state produces a fatigue substance as well as carbon dioxide which exercises a narcotic influence on the brain. This fatigue substance is eliminated during sleep. This theory also explains the periodicity of sleep, but cannot be the exclusive

cause because we sometimes sleep without fatigue.

The endocrine theory of periodicity of sleep has been advanced and it is very plausible as it develops the idea of a balancing change of activity in two groups of glands.

The appearance in Europe of the epidemic of lethargic encephalitis which was described by Professor C. von Economo refuted all the foregoing theories and by working out the pathogenesis of this disease he has located and outlined an area of grey matter, the function of which is the regulation of sleep and in the broader sense of the word is a sleep center. Economo showed that in the somnolent-ophthalmoplegic form of this disease; that is a form with a somnolence which may range from a light sleep to a continuous soper in which patients may sleep for weeks, but in most cases can be aroused, associated with eye muscle disturbances as diplopia, ptosis, ophthalmoplegia, the pathology is an inflammation in the posterior portion of the lateral wall of the third ventricle which is adjoining the nucleus of motor oculi nerve.

In the other form of encephalitis which gave the initial symptoms of choreatic unrest with a tormenting insomnia the inflammation was found anteriorly in the lateral wall of the third ventricle near the corpus striatum, where, according to knowledge we already had, choreiform diseases originate.³

As the inflammatory processes extend frontally or caudally symptoms may occur in accordance with the structures involved. There are many other disturbances of sleep besides somnolence and insomnia produced by encephalitis, such as the inversion of sleep, somnambulism, etc.

Now, there are a number of other diseases affecting this area which produce a similar symptomatology, namely, tumors of the infundibular region do this occasionally as an early symptom and all cerebral tumors cause soper as a late symptom, hemorrhagic areas in the walls of the third ventricle, Wernicke's and Gayet's disease.

Inasmuch as any condition or disease affecting this area causes the same reaction we consider that the proof is absolute that the function of this area of grey matter is the regulation of sleep and, therefore, it is termed the center for sleep regulation.

This sleep regulating center probably acts by coordinating the vegetative and psychic system to the changes which occur in sleep; that is changes

in respiration, circulation and bodily functions (demonstration of slide).

Now the practical value of this knowledge is twofold: first, as to localizing cerebral lesions; next, for the things that are to be hoped for in a therapeutic way, in the direct treatment of insomnia.

Already experiments have been made that justify us in believing that the time will come when we can influence sleep directly through this center. Hess of Zurich has succeeded in making cats fall asleep immediately with all the symptoms of normal sleep, by the induction of a very weak electrical current through fine electrodes to the posterior wall of the third ventricle and the anterior region of the aqueduct.⁴

Some results have also been obtained with diathermy. Probably this will some time be an agent that will relieve insomnia and it will not be necessary to prescribe the already overworked hydrotherapy, psychotherapy, and finally hypnotic drugs in the treatment of this annoying condition.

Sleep is the product of such a complex mechanism that a sleep center does not answer all the requirements. So it is a very reasonable assumption of many investigators that the fatigue substance in the blood sets this center into action.

The great Russian physiologist, Pavlov, made experiments on conditioned reflexes in animals which show that the prolonged or repeated action of a conditional stimulus leads to drowsiness; for instance, the flow of gastric juices in dogs is increased on hearing the dinner bell, which is associated with the idea of giving food, but when after hearing the bell repeatedly and no food is given a sleep is caused.⁵

Now it is known that prolonged action of some cortical areas leads to an inhibition of the neighboring cortical areas, and this inhibition spreads generally over the remainder of the cortex and causes sleep. Thus it is suggested that multi-conditioned reflexes are a factor, probably the most important one in setting off action in the sleep regulating center.

Since insomnia is a symptom of physical disease or mental condition even though a severe symptom, probably the earliest or only symptom, the chief complaint that is brought by the patient, our recourse at present for the relief of this condition is to find the underlying cause and attack it.

As a matter of convenience and for clinical purposes with reference to therapeutic ends, we have made the following simple classifications:

1st. Insomnia due to physical disease.

(a) Vascular.

(b) Toxic.

2nd. Insomnia from external irritation, noise, climatic condition, etc.

3rd. Insomnia of mental origin.

The diagnosis and treatment of the first type is really a problem of general medicine. However, it is wise to remember that insomnia may be the prodromal symptom of an approaching disease and this complaint should lead to careful examination before it is placed in either of the other classes. In passing I may state that the vascular causes include both the high and the low tension types, both of which cause a cerebral hyperemia with which sleep is impossible. It also includes that distressing insomnia which is associated with chronic heart disease.

The toxic is the commonest form met with in practice and takes into its scope all toxemias from the remotest focus to the severest uremia and infectious processes.

In the second type, in those insomnias due to external irritations the treatment is obvious. But one comment should be made here.

A great number of neurotic patients attribute their insomnia to noises, especially if they should happen to be in a hospital, sanitarium or nursing home. They claim that they are in a noisy part of the building; that the noise is unbearable. It is usually safe to disregard this complaint of such patients to the extent of refusing to move them to another room. "One hears only the noises he listens for." And in these cases the sleeplessness is due to anxious expectancy.

The third group is that great class of people who are sleepless from psychic causes, which has inspired the writing of this paper as the experience of the writer has been greater with this class and the results of the treatment have been more varied than in the other. It should be realized that this group contains numerous types and that the particular mental causes are as numerous almost as the individual concerned, but they fall into certain general classes.

The most common psychological factor is overt worry or anxious preoccupation and this is found in the large number of people who have fallen into the habit of doing their thinking and planning after going to bed, outlining their next day's work.

and recapitulating all the events of the previous day, especially if some have not been profitable or pleasant.

Then there is another type of patient who denies that he worries when he goes to bed. He states that he goes to bed and "thinks of nothing." This is the man who worries all day and then expects to go to bed and change the form or the topic of his preoccupation. What he is actually doing is making a tremendous effort to repress his daytime perplexities, and this effort keeps him awake. The only treatment for this type of patient is removing his daytime anxiety.

There is another anxiety state which is secondary to both types just mentioned; that is anxiety which occurs over the loss of sleep. There is existing in the lay mind a profound impression of the disastrous results of the loss of sleep, so the fear of insanity follows and this fear or anxiety is then the most potent factor in producing wakefulness.

The writer recently observed a patient who lost so much sleep in recapitulating over his financial losses during the depression following the real estate boom that he began to visualize the most terrible possibilities of his plight. He was afraid nothing could now save him from insanity on account of the destruction of brain cells that had taken place during his sleepless nights which he had spent walking in the park. This fear was so tormenting he was reluctant to confide in the writer as a physician. After his confession and when he was assured that the loss of sleep had the most trivial effect on the mind or body and was never the cause of insanity, he immediately relaxed and dozed on the examination couch. After this fear was relieved his insomnia was cured.

The experimental data that have been obtained on the loss of sleep show that the effects in man are of a trivial nature. One can truly say that clinically the loss of sleep has never been an important factor in the causation of any mental illness.⁶ The experiments at Colgate University on students revealed that the loss of sleep was attended with reduction of mental alertness, and emotional stability, but nothing of a destructive or irreparable nature.⁷

Any patient who suffers from insomnia, whether he expresses any anxiety or not over the disastrous effects of the loss of sleep, should be given the benefit of this comforting assurance as a therapeutic measure.

Probably the repression that causes most restlessness is that of the moral conflict. The statement of a person that he has not slept well usually brings the comment of a bad conscience. It is often a bad working conscious mechanism that causes it. The "would be" sleeper endeavors to keep his ethical failures pushed back in the lower strata of his unconscious and they are constantly struggling to get into consciousness and thereby causing a wakefulness.

There are many cases of insomnia which begin in response to some cause for anxiety and still persist after the original cause has disappeared. In these cases some inquiry should be made into the general attitude and emotional stability and usually a defect in the nervous make-up is found.

The methods of inducing sleep that are commonly employed are as a rule provocative of sleeplessness. The counting of sheep jumping the fence and other things which require mental effort produce a cerebral hyperemia which makes sleeping impossible.

In all the insomnias resulting from mental causes we see the conditioned reflexes spoken of above blocked. Any voluntary effort to produce sleep breaks these reflexes. We cannot possibly will ourselves to sleep. We allow ourselves to succumb to sleep which is brought about by these stimuli of the conditioned reflexes.

The usual sleeping time, the usual preparation for going to bed, such as undressing, the gradual recession of interest in the events of the day, the allowing the mind to wander at will without any conscious direction and finally the lying down in a comfortable bed and complete muscular relaxation are the stimuli that bring about the conscious inhibition and sleep. To go to bed in the middle of an enthusiastic discussion or argument without the relinquishment of mental activity is analogous to eating while on parade. Both acts are out of congress with the associated events and the former will not be followed by sleep and the latter will not be followed by digestion.

The writer is conscious that after every effort has been made to find the psychic causes producing insomnia and that one has done all humanly possible to eliminate these causes that in some patients insomnia still exists, and the patient goes on with this annoying discomfort. Is it too much to hope that since von Economo has localized the center regulating sleep and Hess has produced sleep by inducing electricity through this area,

that the time will come when we can relieve this distressing symptom by direct influence on the sleep center?

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DISCUSSION

Dr. W. H. Spiers, Orlando:

Dr. Smith has covered a very unusual subject. In fact, I have never heard a paper just exactly like it. Insomnia is a condition that has such varied symptoms and such varied causes. I will not discuss the physiological causes of sleep, and there is very little for me to say. But, insomnia is such a common malady and one of the most annoying conditions to be afflicted with. The causes are so many and varied that it takes quite a study of the individual to determine what to do for him. I am of the opinion, however, that in these cases there is bound to be some organic lesion. To some of the psychoanalysts there are causes that are cured by suggestion, but unlike the cases of the psychoanalysts, there is, I believe, in these cases an endocrine disturbance or some other source of toxins, such as mild infections.

This is a very hard paper to discuss, and a very hard paper to prepare, but I have received some suggestions from it that I believe I can utilize.

Dr. J. Q. Folmar, Chattahoochee:

I did not come over here expecting to discuss this paper; however, I have enjoyed it very much. I think the matter of the physiology of sleep is about as complicated as the physiology of some of the various autonomic systems of the body, for instance, that of respiration. We are definitely sure that there is a central respiratory system, and I believe that many of the studies made with reference to central encephalitis and some intracranial organic lesions located in the various sections of the brain lead us to believe that there is equally a central sleep center.

This is a subject that to me is very interesting, but the more I study it, the more confused I become with reference to the physiology.

Dr. Smith, Tampa, (concluding):

I have nothing further to add.

ARTIFICIAL PNEUMOTHORAX IN THE TREATMENT OF PULMONARY TUBERCULOSIS*

M. JAY FLIPSE, M. D.

Miami.

The intentional collapse of a lung for the treatment of pulmonary disease is a comparatively recent procedure. First recommended on theoretical grounds in 1821 by James Carson of Liverpool, it was not until the beginning of the present century that this method of treatment found application in more than a handful of cases. James Houghton in 1832, and Stokes in 1837, pointed out the not infrequent beneficent influence of spontaneous pneumothorax in certain cases of advanced phthisis. Credit for the first pneumothorax treatment is given to Potain who in 1884 injected sterilized air to replace fluid in a case of spontaneous hydro pneumothorax. During the following five years he treated two other cases by the same method, reporting all three in 1888. At about the same time, in 1885, Cayley treated a case of severe tuberculous hemoptysis by open incision of the chest wall, reporting the case to the Clinical Society of London.

During the next ten years, Forlanini treated several cases in a similar manner, reporting them in 1894 and 1895. Three years later, J. B. Murphy of Chicago reported five cases in which pneumothorax was induced by trocar and canula. In 1899, Schell of Indiana used pneumothorax to control a case of hemoptysis, and two years later Lemke reported his results with artificial pneumothorax in 53 cases of pulmonary tuberculosis. From 1905 to 1910, a number of cases were reported by Brauer, Schmidt, Forlanini, Dumarest, Saugman and others. The pneumothorax treatment thus gained rapid recognition in all countries. Favored by practically all who had opportunity to observe its beneficial effects, it is now universally recognized as the one hopeful method of treatment in advanced tuberculosis.

In bringing it to your attention, it is not our motive to offer any contribution of original character. It is rather in the hope that you may become familiar with the indications and contra-indications of pneumothorax together with the results which can be obtained in cases otherwise hopeless. We have availed ourselves liberally of the useful material which has come to our atten-

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tion, and extend appreciative acknowledgment to the sources indicated in the appended bibliography.

INDICATIONS FOR ARTIFICIAL PNEUMOTHORAX

1. Chronic cases of pulmonary tuberculosis in which the disease is clinically unilateral, and in which the usual methods of treatment have been unsuccessful.

2. Cases of unilateral distribution where, for economic reasons, patients are unable to spend an adequate period of time under the usual rest regime and in whom toxemia prevents moderate activity.

3. Unilateral activity with cavitation.

4. Tuberculous hemoptysis where life is threatened by loss of blood, and where the source of hemorrhage can be definitely determined. Here pneumothorax is indicated even with a fairly extensive process of the contralateral lung.

5. Certain cases of bilateral tuberculosis which have failed to improve under ordinary measures of rest in bed.

CONTRAINDICATIONS

In general, extensive disease of various organs, whether of tuberculous etiology or otherwise, precludes artificial pneumothorax.

1. *Lungs*: Extensive bilateral tuberculosis involvement as a general rule contraindicates artificial pneumothorax. However, even in a few selected cases of this type, a partial collapse has occasionally been of benefit. There is a growing tendency to try partial pneumothorax, even bilateral partial collapse in cases which otherwise must terminate fatally.

Advanced emphysema and asthma are definite contraindications. A cautious trial of pneumothorax is, however, justified even in these cases unless dyspnea and cyanosis are present.

2. *Heart*: Serious heart disease, especially of acute nature, does not tolerate pneumothorax. Because of the derangement of pulmonary capillary circulation with a reduced vascular area after collapse of one lung, the right heart must be in fairly good condition to tolerate this procedure. Yet it is often surprising what excellent results are sometimes obtained in spite of chronic cardiac conditions such as myocarditis and arteriosclerosis.

3. *Kidneys*: Acute or chronic nephritis of a severe grade would seem to be a definite contra-

indication. It must be borne in mind, however, that sometimes an apparent nephritis may be an expression of the tuberculous toxemia. Such cases usually improve after the reduction of absorption from the infected lung.

4. *Intestinal Tuberculosis*: It has been well demonstrated that advanced cases of this nature rarely improve after pneumothorax. Gravesen, Brauer, Spengler and Forlanini report that milder cases often show a decidedly favorable response when the auto-inoculation is removed by collapse of the infected lung.

There are, of course, other contra-indications which may appear in individual cases. Each case must be decided on its own merits after as careful a study as time permits. As experience with the method and with the results of ordinary measures of bed rest permit, the development of that peculiarly personal attribute of the physician, medical judgment, will gradually replace the "rule of thumb" decision, and determine without conscious mental processes which cases are suitable for collapse therapy, and which should be rejected.

SELECTION OF CASES

From previous statements, it would appear that there is a rather wide latitude in the application of artificial pneumothorax. Actually in the study of any given group of cases, the number suitable for pneumothorax treatment will be found to be rather small. In a total of nearly 2,000 cases, four prominent workers in this field found from 3½% to 10%, or an average of 7%, immediately suitable. It must be borne in mind, however, that nearly all patients at one time or another during the course of their disease have been, or will be, candidates for artificial pneumothorax. Therefore, the responsibility of the physician is increased in that he must not only discover tuberculosis early but bear in mind the possibility of benefiting the patient by a timely collapse if the patient does not improve under the ordinary measures of bed rest.

PALLIATIVE PNEUMOTHORAX

In certain quite hopeless cases, Saugman reports great temporary improvement from partial collapse. Pisani and Forlanini also feel that even in extensive cases where there is "everything to gain and nothing to lose", the patient should be given the chance with pneumothorax. In these cases, the method differs considerably and instead

of a complete collapse, only a partial collapse is desired. In effect, a partial collapse reduces the toxemia, and often benefits the contralateral lung by relaxation of the mediastinum. Cough, sputum, temperature and aspirated caseous bronchopneumonia are often reduced. These cases are always bilateral and the chief consideration is the progress of the contralateral lung. It has been shown that quiescent or fibrotic apical lesions of the contralateral lung tolerate pneumothorax well; peribronchial and basal aspirated caseous involvement of the contralateral lung usually are aggravated by collapse of the other more advanced lung.

Failures in pneumothorax treatment are chiefly due to adhesions which prevent complete collapse, and in some cases prevent even a partial pneumothorax. In these cases surgical measures such as phrenectomy or thorocoplasty may still be used. Our present discussion, however, is limited to pneumothorax, so even though other surgical procedures are of marked value in selected cases, we will but mention them here without defining their application.

The percentage of failures in the induction of satisfactory pneumothorax depends upon the type of cases being treated. In the hands of various workers, it varies from 20% to 50%. The presence of minor adhesions does not interfere with pneumothorax and, in fact, is encountered in practically every case. It is in cases of obliterated pleural space with massive adhesions that pneumothorax becomes impossible. Since no method other than trial can determine the success or failure of pneumothorax, numerous cases are attempted where the tuberculous process is very extensive. It is surprising how frequently it is possible to induce at least a valuable, if not a complete collapse in the face of what at first appears to be an impossible situation.

DANGERS OF PNEUMOTHORAX

Like all surgical procedures, the induction of pneumothorax involves certain potential dangers which must be borne in mind. We will not emphasize these too strongly since by general consensus of opinion, the danger of not producing pneumothorax in a case requiring it, is far greater than the occasional serious or fatal result attributable to the procedure.

Included among the dangers are:

1. Pleural shock.
2. Air embolus.

3. Rupture of the lung.
4. Perforation of the lung.

Other possibilities are:

1. Puncture of diaphragm or pericardium.
2. Subcutaneous emphysema.

Fortunately, these dangers are minimized by certain precautions, and are very rare in the practice of experienced operators. Nevertheless, they exist not only at the induction of the treatment but even at refill treatments. We do not believe that the frequency of these accidents is any greater than the occasional fatality resulting from the use of general anesthesia in other surgical procedures.

COMPLICATIONS OF ARTIFICIAL PNEUMOTHORAX

By far, the most frequent complication of artificial pneumothorax is pleurisy with effusion occurring, according to Riviere, in about 50% of the cases. The quantity of fluid varies, and is not especially important except that re-expansion of such a lung is usually difficult or impossible after hydro- or pyo-pneumothorax. The fluid is usually sterile, though temperature may be present due to tuberculin sensitization. After a time, the fluid is absorbed, only occasionally need it be aspirated.

Extension of tuberculosis in the contralateral lung can only questionably be considered as a complication due to pneumothorax. There is a greater probability that such extension occurs in spite rather than because of collapse of the other lung. Nevertheless, if such extension does take place, it at once raises the question of the advisability of discontinuing the pneumothorax treatment.

Incidental colds and pneumonia of the functioning of the lung constitute one of the gravest accidents during pneumothorax. While not in any sense a complication due to the procedure, the seriousness of these infections is much greater because of the presence of a pneumothorax. Pneumonia usually terminates fatally. Fortunately in this climate, we have very little pneumonia. In seven years, I have seen but one case of pneumococcus pneumonia in the tuberculosis ward at the Jackson Memorial Hospital at Miami. This patient was not under pneumothorax treatment, but had a spontaneous pneumothorax which had induced about 33% collapse of one lung. He also had bilateral cavitation. In spite of this, he failed to fulfill our prognostication and after a stormy course, the pneumonia terminated favorably with apparently no immediate exacerbation of the bilateral tuberculous infection.

METHOD AND DURATION OF PNEUMOTHORAX TREATMENT

We have intentionally omitted a discussion of the method of giving pneumothorax treatment, because we did not wish to fatigue you with a theoretical discussion of a procedure which probably but few of you will ever use. Anyone who is especially interested can find an excellent description of the procedure in Riviere's monograph on this subject, or in other texts on surgical treatment of pulmonary tuberculosis.

We will devote a few minutes to the discussion of the rationale of the treatment. The purpose of pneumothorax is to permit a diseased lung to collapse under its own elastic recoil and possibly to compress it if necessary so that there is no longer any expansion under respiratory movements of the chest. With the lung in a condition of full collapse, the blood supply is reduced, cavities are obliterated, and fibrosis takes place to a varying degree in different cases. After a period of time adequate to allow healing, it is the hope of the operator that the healthy parts of the lung will re-expand, and permit a certain degree of function, but that the diseased part of the lung will be firmly fibrosed.

Collapse is induced by introducing a gas into the pleural cavity under controlled pressures, and in measured quantities. Since any gas is gradually absorbed, it must be replaced at intervals to maintain the degree of collapse and compression required for the individual case. In practice, air is the gas used most frequently. The collapse is induced gradually and refills, which at first are required every few days, eventually need be given only at intervals of once in two to eight weeks. To be effective, collapse must be maintained from one to five years. Except at first, the ordinary cases are ambulatory, and frequently able to work, thus becoming economically independent during the course of the greater part of the treatment.

RESULTS OF PNEUMOTHORAX

1. Reduction of the toxemia. It is often little short of miraculous how patients with fever, cough, night sweats, loss of appetite, and all other evidences of a severe infection will, after pneumothorax treatment, lose all these symptoms and be able to go about their business in a fairly normal manner.

2. Limitation of spread of the disease. It is the observation of all workers in this field that the rapid advance of pulmonary tuberculosis is usually due to aspiration of infected sputum with the production of caseous bronchopneumonia. A collapsed lung produces no sputum, and the danger of spread by this method is markedly reduced. The blood and lymph supply is also markedly reduced so that miliary tuberculosis is less frequent.

3. Reduction of danger of hemorrhage.

4. Reduction of infectiousness. The sputum becomes free of tubercle bacilli in about 50% of far advanced cases with pneumothorax, thus reducing the danger of the spread of the disease to others. This is of tremendous economic importance and will doubtless be reflected in the statistics during the next decade.

5. Prolongation of life.

While a proper length of time has not yet elapsed since this method of treatment has come into general use, it is possible to draw some conclusions from the results of earlier workers which point definitely to pneumothorax as a valuable therapeutic measure. When it is recalled that most of the cases treated are third stage—far advanced, sputum positive—the statistics are even more remarkable.

Saugman reports in a series of 310 cases completed, that at the end of ten years, 30% of his series were fit for work. Comparing these cases with those in which pneumothorax could not be accomplished because of adhesions, he found none in the later group fit for work after the 8th year. Bonzoni collected statistics of 3,680 cases treated between 1916 and 1925, including 71 under his own observation. Of the total, 25% were described as cured, 27.1% improved, and 31.29% dead.

The Matsons and Bisaillon have indicated that three factors enter into the end results of pneumothorax. They are in order of their importance:

1. Type of disease.
2. Character of pneumothorax.
3. Status of the contralateral lung.

Regarding the type of the disease, the fibro-caseous offer the best results with 40% clinical recoveries as against 23% to 27% recoveries in cases with cavitation of different degree.

Regarding the character of pneumothorax, Gravesen's figures published by Saugman showed at the end of 3 to 13 years, 70% of the

cases of complete pneumothorax were fit for work and 22% were dead. In those in whom partial collapse only was obtained, but 11% were fit for work, and 58% were dead. Cases with no free pleural space showed 5% fit for work and 66% dead.

The condition of the contralateral lung has been shown by the Matsons to be of less importance than the other two factors. In a series of 282 cases with demonstrable disease in the contralateral lung in only 34 cases was there any extension of the disease, and of these, 22 died. These constituted only 16% of the fatalities in their series of 480 cases. Apical fibrocascous disease of the contralateral lung of active or quiescent character gave 48% and 50% recoveries against 52% in cases with no disease of the contralateral lung. Aspirated bronchopneumonia of the contralateral lung gave poorest results with only 26% recoveries.

The important point in these statistics is that best results are obtained only if pneumothorax is instituted promptly, and early in cases which do not give promise of complete recovery by simple hygienic measures.

DISCUSSION

Dr. W. A. Claxton, Melbourne:

I am sure we have all enjoyed this paper very much. It is very instructive, especially since we have not had very many papers along this line. The treatment of tuberculosis has gone through a regular cycle in the past number of years. Those of us who are familiar with the history of tuberculosis will remember that years ago they put a man on horseback even where the man was so weak he had to be held on the horse and made him travel around the country on horseback to cure tuberculosis. Later that method was modified a little bit to the extent of telling the man to get an outdoor job. Still later the question of rest became of paramount importance, and rest along with food and good hygienic surroundings was thought to be the best treatment for tuberculosis. And in most sanitariums rest is the principal factor in the treatment now. However, within the last few years the treatment of tuberculosis has changed from what we might designate as passive treatment to active treatment. Rest is still the greatest factor in effecting a cure but instead

of allowing the patient to lie in bed for months or years and perhaps just holding his own or improving a little bit and having set-backs, the tendency now is to take up more active measures of treatment, and that is where the question of pneumothorax comes in.

With reference to pneumothorax, it is one of three surgical measures, each of which has been tried with good results, but pneumothorax is the ideal of these three methods. Thoracotomy is the first choice when pneumothorax cannot be utilized, and thoracoplasty is the third choice. Pneumothorax is the least harmful of these methods and in the majority of cases is very successful. I was connected with an institution once where we had about 250 patients and of these forty were taking pneumothorax. In another institution we had about 20 pneumothoraces out of 200 patients, so you can see the method is being used extensively. Our plan usually was to wait three months, and if the patient was not improving as he should we tried to establish pneumothorax.

I remember one patient who came in with much toxemia. The question of pneumothorax immediately came up. It was at that time a unilateral case. We waited about two weeks, then made up our minds to do a pneumothorax, but decided to take another X-ray picture. Much to our astonishment the disease had extended to the other side and was stationary in the original lung. We established a pneumothorax in the newly affected lung and by keeping the man flat on his back for eight months with pneumothorax we were able to get him in condition where he could get out of bed and go back to work. That was rather an outstanding case because the disease was progressing so rapidly.

In giving the details of this treatment there are one or two little things that Dr. Flipse purposely did not mention: All pneumothorax refills should be controlled by X-ray. A fluoroscopic examination should be made of the patient before he goes in for refill and after he comes out. You can detect very small amounts of fluids by the fluoroscope where you possibly could not by physical examination and also can more carefully regulate the amount of air injected.

Dr. M. J. Flipse, Miami, (concluding):

I have nothing further to add.

SPINAL ANESTHESIA*

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My only excuse for presenting a paper on this subject is because of considerable personal interest in it, and the wide-spread attention that is being given it throughout the medical world. My own experience, although dating back some nine years, has been rather limited, and I present this more as a preliminary report.

I am not a fanatic on the subject. I do not think it is superior to all other forms of anesthesia as a routine, and I use ether in far more cases than the spinal. But it does have a very important place in surgery and there is a definite field for it. There are cases in which no other form of anesthesia can be used with anything like the safety that this can.

Especially since the war, greater progress has been made in anesthetics than in any other branch of surgery. Ethelyn has been put in use as a new agent. The old anesthetics and methods have been improved, and local anesthetics have been greatly advanced, being far less toxic than before.

Standing out boldly above the rest, and demanding a place in surgery, is spinal anesthesia. The day has arrived when any man practicing surgery or anesthesia must familiarize himself with this type of anesthesia. The method is firmly founded. It is accurate, scientific, and safe. During the past two years there has been much progress made, and the literature is filled with it, but it is not new. In 1899, Matas operated successfully with it; Babcock took it up as routine in 1904; Babcock and Boyd each have operated over twenty thousand cases with it.

The profession, until very recent years, has been under the impression that spinal anesthesia was to be used only in bad risks, in which it was unsafe to use ether. Naturally, if used in risks of this type only, it was inevitable that it fall into disrepute.

As we knew spinal anesthesia in the past, it had many features that were undesirable, and was considered unsafe for routine use. The duration of anesthesia was uncertain, intensity variable, failures frequent, nausea and vomiting troublesome. Post-anesthetic conditions, such as violent headache, paralysis of the sphincters,

diplopia, temporary blindness, vertigo, and palsies, were not rare. At the time of anesthesia there was marked, often alarming, drop in blood pressure, the patient often being pulseless, and as Hillsman expressed it: "the blood pressure was nothing over zero."

One of the great fears experienced in the use of spinal anesthesia is that of respiratory paralysis as a result of the action of the drug on the medullary centers. The idea conveyed in most instances is that because of diffusion, the drug ascends in the spinal canal from the point of its injection, and if it reaches the medulla, depression of the respiratory center takes place to such an extent that paralysis ensues.

Koster and Kasman of Brooklyn, New York, have done a great deal of experimental work to discredit this apparent danger. They find that it is advisable to induce (rather than guard against) diffusion to the medulla and brain stem, in order to secure anesthesia of the entire body. If, as some claim, diffusion from the lower portion of the spinal sub-arachnoid space is ordinarily so slight that the amount of anesthetic agent which reaches the medullary portion of the cerebro-spinal system is insufficient to cause enough depression to result in respiratory paralysis, and that only occasionally does the concentration of anesthetic become great enough to induce respiratory depression and paralysis, then by direct application of a concentrated solution one should always be able to induce such respiratory depression and paralysis. This Koster and Kasman disproved by the direct application of neocaine solution to the medulla of both frogs and cats. In no instance, although there was a complete anesthesia with paralysis, was there any appreciable change in the respiratory movements of the animals.

Continuing to quote from their article, it is quite apparent that the anesthetic agent had a selective affinity for sensory nerve tissue. This being true, it is not difficult to understand how an anesthetic solution which diffuses up to the medulla or to the level of the region of the phrenic nerve, namely the third, fourth, and fifth cervical roots, could cause abolition of sensory conduction without any effect whatsoever upon the motive power of the respiratory organs.

Their clinical application of these experiments has proved, certainly to their satisfaction, that

*Read before the Hillsboro County Medical Society, Tampa, March 18, 1930.

one can obtain a complete anesthesia by spinal injection without fear of respiratory paralysis.

Personally, probably through lack of experience with this anesthetic, I prefer the anesthesia not to be complete. I have not up to this time operated above the diaphragm. Possibly, or rather probably, as time goes on, and my experience increases, I will fear it less. Certainly this has been true in the past.

This anesthetic prevents operative shock by blockage of shock impulses coming from the operative field and producing the "anociassociation" of Crile. It is indicated in advanced cardiac diseases, especially those of failing compensation, as the fall in pressure rests the heart and the burden is considerably lightened. It is of primary importance in pulmonary diseases and in late renal diseases; in hypertension, anemia, in diabetes, and in osteomyelitis.

The fall in pressure which sometimes occurs is not one of shock. It is due to anesthesia of the greater splanchnic nerve, supplying all the blood vessels of the abdominal viscera. As a result, there is a great dilatation of the splanchnic vessels, with a corresponding lessening of blood in the peripheral vessels.

Nine years ago, I made a trip to Philadelphia to see Babcock use this form of anesthesia. I returned with considerable of the enthusiasm that he had. Over a period of a year or more, I used it, but the majority of the cases were poor risks, more especially those of hypertension type. It did not take my enthusiasm long to wane, because of the alarming symptoms that were so prone to develop. Frequently the patients became pale, clammy, and pulseless, the pressure dropping over 100 mm. in some instances. I never had a fatality, but discontinued its use because of the fear of one. My experience was no different from that of others, and it was only the more courageous who continued in its use, and by steady experimentation have eliminated most of the ill effects, and given us an anesthetic that is safe.

The ideal spinal anesthetic would be one that would be certain in its effect, constant in duration, in direct ratio to the amount of anesthetic used; one that would not affect heart action, arterial pressure or respiratory function; one that would lessen nausea, pallor, and cold sweats.

George P. Pitkin, of New Jersey, has devoted a great deal of study to the solution of the many

problems mentioned above, and has done much toward the elimination of danger. His technique and solution are gaining universal notice and use. He has prepared a solution that is lighter than spinal fluid, and the level of anesthesia is governed by the angle of the patient's position. Before the injection of the anesthetic into the spine, he injects the skin of the back with 1 c.c. solution, 1% novocain and 5% ephedrin hydrochloride, which prevents the blood pressure drop. In fact, the usual thing is that there is an increase of five to twenty mm. in pressure for the first fifteen or twenty minutes, then a drop to normal, where it usually remains.

There has been much improvement in the purity of drugs in recent years, which has contributed much to the safety of spinal anesthesia.

Recently, we have been using this anesthesia oftener, and find it far superior to that of our previous experience. There has been a complete absence of the alarming symptoms mentioned. In none of these cases, with possibly one exception, has there been any sign of toxemia or shock. With the exception of the few in which the anesthesia has not been complete, the method has given perfect results. I am, therefore, viewing it very differently now than when I first used it.

There are many things in its favor over other forms of anesthesia. The discomfort of ether inhalation, which is such a fear to many, is thus eliminated.

We have, during our series of cases, used both spinocain and novocain, using from 75 to 200 mg. of novocain crystals for an injection, and spinocain from 1½ to 4½ c.c., each 2 c.c. ampoule of spinocain containing 200 mg. of novocain, and put up in a solution lighter than spinal fluid.

Pitkin claims for the spinocain that it is easier to localize the anesthesia by what he calls his "controllable anesthesia." I find it advantageous to use the novocain crystals, dissolved in spinal fluid in those cases where accurate angulation of the patient is difficult to obtain, or where the patient is to be injected in the bed before removal to the operating room. For example, in painful fractures of the lower extremity, it may be advisable to anesthetize the patient before moving, so as to eliminate this pain; or in the removal of a cast from a painful fracture of the leg that is to be operated, we inject the anesthetic

while the patient is still in bed, and the cast is removed before going to the operating room, obviating this tedious and dusty process in the operating room. Otherwise, we are somewhat more inclined to use the Pitkin solution of spinocain. We have gradually increased our doses as we lose our fear of the drug.

Romberger in a recent article states that Pitkin's technique of 2 c.c. of spinocain expanded to 8 c.c. does not give satisfactory anesthesia in the upper abdomen. He uses as routine 1 c.c. diluted to 8 c.c. for the upper abdominal and long cases, and should this not give satisfactory anesthesia, he re-injects.

In one case of a woman weighing 110 pounds, operation being cholecystectomy and appendectomy, he injected at the first dose 5 c.c. of spinocain expanded to 10 c.c. by spinal fluid. Ten minutes later, realizing the anesthesia was incomplete, he injected 3 c.c. of spinocain expanded to 6 c.c. After waiting another ten minutes, he gave a third injection of 4 c.c. of spinocain, unexpanded, and got a satisfactory anesthesia with no operative or post-operative concern, sensation and motion returning in one hour and thirty minutes.

Our preparation for spinal is practically the same as for ether, except we never give enema the morning of operation. This is because there is a paralysis of anal sphincter and lower colon, and of the inhibitory nerves to the entire gut. The motor nerve (vagus) not affected. This condition, of course, gives increased activity to peristalsis of gut. There is, therefore, the possibility of an involuntary stool which might soil operative field because of Trendelenburg position. It is also because of this that the gut is so easy to handle in abdominal cases. It is small because of the contraction. We give 1/8 to 1/6 gr. of morphine 1½ hours before operation and 1/8 gr. morphine and 1/150 atropine one-half hour before operation. When using spinocain for abdominal work, we inject 3 to 4 c.c. of the spinocain in the second lumbar space, after diluting it to 6 or 8 c.c. with spinal fluid. The injection is made through a small needle of a 20 gauge, with bevel of 45 degrees. This is always given with the patient on the side, never while sitting. Patient is then turned on back, with table level, or with head lowered a little. The anesthesia is watched, and when rib margin is reached Trendelenburg is increased to about 5

to 10 degrees. If anesthesia should not reach high enough then, 1 to 1½ c.c. spinocain is injected in the first space. For bladder work, or operation on lower extremities, 2 c.c. in the third space is sufficient.

When using novocain crystals, we use for abdominal work 100 to 200 mg. diluted to 4 to 6 c.c. with spinal fluid, in the second lumbar space. This can be given while sitting, because it is of the same specific gravity as spinal fluid. However, I prefer to give mine with patient on side. The level of anesthesia in this is not governed by the position of the patient as in spinocain. However, in all spinal work (with possible exception of Pitkin's heavy solution), the patient must be in Trendelenburg position to prevent anemia of the brain. Whether we give spinocain or crystals, we use the same preliminary injection of 1 to 2 c.c. of 1% novocain, 5% ephedrin solution.

Any danger that may come from spinal anesthesia lies in the anemia that may develop in the brain, and this is overcome by the Trendelenburg position. I believe it is unwise to do any operation under spinal in which it is not possible or convenient to put the patient in the Trendelenburg. In so doing, the cerebral anemia is overcome by gravity.

We have used spinal anesthesia in only a comparatively few cases, approximately 77 cases in both the first and last group. This is not many, but still sufficient to get a pretty good idea as to the value of the procedure. All of the latter group were within the past fourteen months. During the seven-year interval during which I did not use this anesthesia, there has been much improvement, and all my old fears have been gradually eliminated during the past twelve months, and it is with an increasing feeling of safety that we use it. We have done the usual operations below the diaphragm, including gall bladder, hysterectomy, intestinal obstruction, hernias, appendices, prostatectomy, fractures of leg, both of thigh and lower leg, debridments, etc.

The vast majority of these cases were given spinal because ether was contraindicated to some degree, for one reason or another, or by request of patient. The anesthesia in all but three was entirely satisfactory. One of these was last June. 2 c.c. of spinocain was given in the third space, followed by 1½ c.c. in the second space. Anesthesia was not complete and ether was

given. She simply did not have enough anesthetic. Within the past month, I have had to re-inject two cases after having put $3\frac{1}{2}$ c.c. in the second space, to go above to the first space and inject 1 c.c. more, and obtained perfect anesthesia in both. The day after I moved to Tampa, September 18th, I injected $2\frac{1}{2}$ c.c. in the second space for hysterectomy, tested out skin and after twelve minutes, thinking I had anesthesia, began operating. Much to my chagrin, patient complained of pain. Gas ether was given for ten minutes, at end of which time I noticed the marked abdominal relaxation that is obtained only with spinal anesthesia. The gas ether was discontinued. The anesthetic was complete and the operation proceeded under the spinal. My mistake was in beginning before I was certain anesthesia was present. The other unsatisfactory case was hysterectomy for bleeding fibroid in an obese anemic woman. $3\frac{1}{2}$ c.c. spinocain was given in the second space. The anesthetic was perfect, but patient complained greatly of nausea and retching, which was troublesome during operation. She had had morphine grs. $\frac{1}{6}$, one and one-half hours before operation, and morphine $\frac{1}{8}$ and atropine $\frac{1}{150}$ one-half hour before operation. The nausea and retching continued until the following day when all morphine was discontinued. The nausea promptly subsided. I think the morphine was more to blame than the spinocain.

Other than these three, the anesthesia has been in every way satisfactory, and certainly in the first two the fault was mine, not the fault of the anesthetic agent.

There has been a marked absence of vomiting, abdominal distention and post-operative discomfort associated with ether. There is less shock, frequently the pulse on return to room being as low as when going to operating room. Without exception, the patients are delighted with the anesthesia. As I gain experience with it, my regard for it increases. The beautiful relaxation, which is such a great aid to adequate exposure, is seen in no other form of anesthesia.

In conclusion, let me say that the use of spinal anesthesia is certain to give one a high regard for it, and the eradication of the fear of it which most men now have. It is swift; it is, with proper technique, practically certain; it is controllable; and it is safe.

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CAUDAL ANESTHESIA IN RECTAL SURGERY

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Miami.

Caudal anesthesia is a state of anesthesia produced by the injection of an anesthetic agent into the caudal canal of the sacrum, thus interrupting or blocking the sacral nerves which supply the rectum.

The procedure has become a valuable aid to the general surgeon who has been willing to acquire the simple technic necessary in the successful administration of novocaine in this manner. Much has been written, giving every detail in technic, and I feel that many surgeons have been discouraged in the use of caudal block because of the difficulties that may be met in following the technic as outlined in most text-books on anesthesia. It is with this in mind that I wish to present a technic that will get results and still not be a laborious procedure to follow.

The equipment necessary to produce caudal anesthesia consists of a fresh solution of one per cent novocaine, one ampoule of adrenalin, an ordinary luer syringe of ten cubic centimeter capacity, a spinal puncture needle that will fit the syringe, and a small hypodermic needle.

The patient is placed in a prone position on the table, with a pillow or sand bag under the spines of the ilium. The skin over the sacrum from the lower lumbar vertebra to the coccyx is prepared by first applying ether, followed by alcohol and iodine.

The two cornua of the sacrum are palpated at the base of the coccyx. The small hypodermic needle is attached to the syringe and a cutaneous wheal is raised between the cornua. With the same needle the sacrococcygeal ligament is injected with several cubic centimeters of novocaine. This injection should be followed by a brief pause, at which time the patient can be assured that he will not be subjected to further pain. The hypodermic needle is removed and the spinal puncture needle with the stilet in place is inserted through the wheal site and the sacrococcygeal ligament until bone is touched. The

butt of the spinal needle is then depressed and the point of the needle forced forward an inch. It is unnecessary to force the needle its whole length into the caudal canal, as the novocaine will permeate the loose fatty tissue if only its point is in the canal. Evidence that the needle is in the caudal canal consists of a free flow of novocaine from the syringe to the canal with very little pressure.

Forty to fifty cubic centimeters of a one per cent solution of novocaine is injected into the caudal canal slowly and the needle is then removed. Anesthesia is complete for rectal surgery in about fifteen to twenty minutes, and no effort should be made to proceed until this time has elapsed.

I have not found it necessary to resort to injections of the sacral foramen in performing operations on the rectum. It is my belief that most surgeons insist upon the parasacral injections to enable them to proceed without the twenty-minute period of grace. Therefore, caudal anesthesia without the parasacral injections is not meant for the surgeon who is impatient.

I have heard rectal surgeons say that the relaxation from the caudal injections is not complete, but when supplanted by parasacral injections the relaxation is complete. It has been my privilege to discount this contention by raising the cutaneous wheals along the sacrum so that the surgeon could see them, but not injecting the sacral foramen. The relaxation was suitable if the wheals were present.

Labat, in his excellent book on anesthesia, says that a show of blood from the caudal needle is evidence that the needle is properly placed. While this is true, I feel that the show of blood carries some moment in the production of novocaine reactions. The show of blood is not encountered if only the point of the needle is inserted in the caudal canal. The forcing of the needle along the bone will injure the venous plexus that lies in the caudal canal, and will open up the blood channels for a more rapid absorption of the anesthetic agent. I feel that this injury to the venous plexus is the cause of most of the reactions seen in this form of anesthesia. During the past six months I have made every effort to keep the point of the needle out of the venous plexus by not forcing it over an inch

into the caudal canal. In a high percentage of cases this can be accomplished if the operator exercises care. Once the needle is inserted and there is no flow of blood from its lumen, it is presumptive evidence that the venous plexus has not been injured, and I feel safe in injecting the solution of novocaine with no concern of an impending reaction.

An alternative presents itself in those cases in which, with this technic, the sacral venous plexus is injured. The needle is withdrawn and the second sacral foramen on each side is injected. If by any chance this insertion of the needle hits a vein, the needle is withdrawn and the third foramen is injected. In other words, no solution is injected into a foramen in which the needle has injured a vein. At times this has been awkward, as the second foramen on one side may have been injected, and on the other side I am forced to rely on the third or fourth foramen before I reach a bloodless spot. The anesthesia will be the same regardless of the foramen used, provided sufficient time is allowed the solution to permeate the nerve trunks.

In following this procedure for caudal anesthesia I have had no novocaine reactions, and it is largely from the results of this procedure that I venture to assert that most of the reactions encountered are the result of venous absorption of a warm solution of the drug.

The practical points for the surgeon to consider in the use of caudal anesthesia are:

One needle injection is simpler.

The more needles used the more likelihood of entering the sacral venous plexus and the spinal canal.

The minimum amount of pain to the patient.

The lessening of the possibility of slough following injection.

The only disadvantage encountered is the time that must be allowed to elapse before the anesthesia is complete.

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GET WHAT IT'S WORTH

Merchants in a city do everything to get business. They keep up the appearance of the store, they stock good quality merchandise and they advertise.

Physicians are merchants in a certain sense of the word. They have to make a living with perhaps enough in the savings to guard against the inevitable time when the hand is no longer steady and the eye grown dim. They modernize their office, give their patients their best and get advertising through these pleased persons.

It is true that in medicine there is no set scale of prices. But there is an average fee in a community. Some doctors, not all but some, are cutting below these average fees to attract a volume of business and keep others from getting these cases. People, as a rule, know doctors only by reference of physician or friend. Some people shop. When one doctor lowers his fees, he gets

the shoppers. But soon the others get on to this and come down to the level of the lowered fee to meet competition and keep clientele. As a result, the first to cut, must cut again or he is right back where he started. The public is pleased by the "price war", and the physicians suffer loss in income.

An ethical practitioner should not belittle his work by charging less than the established fee. He should tell the shoppers the regular fee and stick to it. If the case is worthy of a lowered fee, or even charity, no one would refuse. But the day is not far off when the medical profession will be bossed by the laity instead of being respected and honored if our business methods do not improve. Competition is fine when it is clean and just. We do not want to fall in line with the cut raters.

COUNTY SOCIETIES

Each county society is a component part of the State Association which is in turn a part of the National Association. The county society, therefore, is the representative of the state and national groups and is in touch with the laity more closely than the other organizations, therefore the actions of each county society and the members of the society are judged by the public and reflected for or against the state and national organizations.

The actions of the county societies are oftentimes carefully scrutinized by the public more so than we realize, quite frequently doctors will hear the laymen make remarks about the illegitimate work of other doctors who are members of organized medicine. This is and should be embarrassing to the honest and conscientious man who knows that such work is being carried on by a fellow member of his society. It is the duty of every doctor to report the irregularities to the Board of Censors of his society and have an impartial investigation made of these men and if they are found guilty their connection with the local society should be suspended immediately. This will occasionally result in some criticism of the person who started the investigation but in the long run will be of benefit to the individual and to organized medicine as a whole. The sooner the laity discovers that organized medicine will not permit irregular or illegitimate work by its members the more respect they will have for organized medicine.

This is the duty of the county society and should be supported and encouraged by the State and National Associations.

One county society in this state during the past year has suspended relations with five members, two for conduct unbecoming a gentleman and a physician and three for other causes. This society should be commended for its stand and particularly its few members who undertook these investigations and demanded that this action be taken.

It might be well for other local societies to investigate their ranks and take a definite stand against irregularities of any kind by its members, for judgment of organized medicine by the public depends to a great extent upon the action of local county societies and their members.

STATE NEWS ITEMS

The American College of Physicians will hold its fifteenth annual clinical session at Baltimore, Maryland, from March 23rd to 27th, inclusive, 1931. The Lord Baltimore Hotel will be headquarters. Dr. Sydney R. Miller, Baltimore, as president, will have charge of the selection of the general scientific program. Dr. Maurice C. Pincoffs of Baltimore, has been appointed by the Board of Regents as the General Chairman of the Session, and will make all local arrangements, including the making up of the program of clinics. Business details will be handled by the Executive Secretary, Mr. E. R. Loveland, from the college headquarters, 133-135 S. 36th St., Philadelphia.

* * *

Dr. G. H. Edwards of Orlando recently spent a three-weeks vacation in the north. He attended the Kiwanis convention in Atlantic City as well as clinics in New York City.

* * *

Dr. L. M. Gable of St. Petersburg is at summer training camp at Fort Scriven, Ga. He is a lieutenant colonel of the Medical Reserve Corps.

* * *

Mr. and Mrs. Hobart Clark Hare announce the marriage of their daughter Helen to Dr. Shaler Arnold Richardson. The ceremony was quietly performed at 10 o'clock Friday morning, June 20, in the Church of the Good Shepherd by the Reverend C. A. Ashby, rector of the church. Dr. and Mrs. Richardson left immediately following the ceremony for a trip of two weeks' duration in the North.

Affiliation with the American Heart Association was decided upon at the first meeting of the executive committee of the Florida Heart Association, held in Jacksonville recently.

A tentative program was prepared to be carried out in conjunction with the Florida State Board of Health, Florida Medical Association and Florida Public Health Association.

The Florida Heart Association is only a little more than a year old, having been organized at St. Augustine, April 2, 1929. Its object is the study and prevention of heart diseases and its activities will include clinics, research and publicity and other forms of educational work relating to the cause, prevention and treatment of heart diseases.

Those present at the meeting were: Dr. Herrman H. Harris, vice-president and chairman of the scientific section; Dr. Louie Limbaugh, secretary-treasurer; Dr. T. Z. Cason, president of the Florida Public Health Association; Dr. Henry Hanson, state health officer, and Sherwood H. Smith, executive secretary of the Florida Public Health Association, all of Jacksonville.

* * *

Dr. C. M. Sandusky was appointed as an associate in the ear, nose and throat service of the medical staff at the Duval county hospital at the meeting of the Duval county welfare board recently. The appointment was made upon the recommendation of Dr. H. Marshall Taylor, chief of the service.

* * *

Dr. B. C. Wilson of Jacksonville, district medical officer of the State Board of Health for north-eastern Florida, left recently for New York and Baltimore, where he is to take post-graduate work in public health work. Mrs. Wilson and daughter accompanied him. Dr. Wilson will return to Jacksonville about September 1.

* * *

Dr. Spencer Folsom of Orlando and Miss Mary Margaret Taylor of Beaver, Pa., were married on June 14th at Beaver, Pa.

* * *

Dr. T. H. Green recently moved from St. Petersburg to Nashville, Tenn.

* * *

Dr. H. D. Smith and family of Sanford spent a two-weeks vacation recently with friends and relatives at Slocum, Ala.

Dr. John Bell of Pensacola recently returned from St. Louis, Mo., where he attended clinics.

* * *

Friends of Dr. L. M. Anderson of Lake City will be interested in his recent appointment as Surgeon General on the staff of General Ayers, Commander of the Florida Division, United Confederate Veterans. This appointment carries with it the rank of colonel.

* * *

Dr. T. B. Echard of St. Petersburg has gone to Connellsville, Pa., his old home, for the summer.

* * *

The Escambia County Medical Society and the Staff of the Pensacola Hospital adjourned for the summer months at the June meeting.

* * *

Dr. J. S. McEwan of Orlando recently returned from attending his class reunion at Northwestern University. Dr. McEwan also attended clinics in Chicago while on this trip.

* * *

The Florida Society of Dermatology and Syphilology held a very interesting meeting recently at the office of Dr. J. L. Kirby-Smith of Jacksonville. As chairman of the Society, Dr. Kirby-Smith presided. The morning session was devoted to the presentation of cases and a discussion of rare skin diseases and their treatment. At the afternoon session, the business of the society was taken up. Dr. C. A. Andrews of Tampa was elected chairman and Dr. J. Frank Wilson of Jacksonville, secretary. Attending the meeting were Dr. C. A. Andrews and Dr. J. J. Saxon of Tampa; Dr. Elmo D. French, Miami; Dr. J. L. Kirby-Smith, Dr. T. A. Blinn and Dr. J. Frank Wilson of Jacksonville.

* * *

A baby girl was born to Dr. and Mrs. Corbett E. Tumlin, Miami, on May 2, 1930.

* * *

The many friends of Dr. C. Carroll of Apopka will regret to learn that he has for some time been ill at the Orange General Hospital, Orlando.

* * *

Dr. J. S. McEwan and Dr. Sylvan McElroy of Orlando recently returned from a fishing trip at Sebastian.

Dr. R. H. Knowlton recently returned from a two-weeks vacation, which he spent golfing in North Carolina.

* * *

As the full time County Health Service develops in Florida under the leadership of the State Board of Health, there will be need for a number of well-grounded physicians from 30 to 40 years of age, with not less than five years' experience in private practice, to serve as County Health Officers. Preference will be given to graduates of high grade southern medical colleges. Funds will be provided with which to give these men a special course of training placing them at the head of a unit. Only energetic men physically fit and of good character will be considered. Those interested may communicate with Dr. F. A. Brink, P. O. Box 4479, Jacksonville, Florida.

* * *

The licenses of six Florida physicians were revoked by the State Board of Medical Examiners in executive session June 16, at Lakeland. J. R. Vinson, Callahan; Robert Bruce McFeeters, Dowling Park; Horace J. Williams, Tampa, and M. P. Sporman, Manatee, were convicted of violation of the Harrison narcotic act; George A. Munch, Tampa, using the mails to defraud in selling bogus diplomas and licenses, and C. Wade Page, Chipley, stealing an automobile.

* * *

At the annual meeting of the American Medical Editors' and Authors' Association, held in Detroit, June 24th, Dr. Shaler Richardson was elected to serve on the Board of Governors of that organization.

* * *

Dr. and Mrs. Frank Gray are happy over the arrival of a baby girl at the Orange General Hospital, Orlando.

* * *

Dr. Will Wood has moved his office from Pine Castle to Holopaw, Florida.

* * *

Mrs. Frederick J. Waas of Jacksonville was recently re-elected president of the St. Vincent's Hospital Woman's Auxiliary. The other officers elected were: Mrs. Julian Gammon, vice-president; Mrs. Joseph Chilli, secretary, and Mrs. Howard E. Cochran, treasurer.

* * *

Applications for associate bacteriologist (medical) must be on file with the Civil Service Commission at Washington, D. C., not later than July 30, 1930.

The examination is to fill a vacancy in the position of Clinical Laboratorian, U. S. Veterans' Bureau Hospital, Palo Alto, Calif., and vacancies occurring in positions requiring similar qualifications throughout the United States.

The entrance salaries range from \$3,200 to \$3,700 a year. Higher salaried positions are filled through promotion.

* * *

Dr. C. A. Williams of St. Petersburg has gone to New England for the summer.

* * *

Five nurses recently graduated from the Riverside Hospital Training School, Jacksonville, and were presented with diplomas at commencement exercises held in the Woman's Club building. Dr. James D. Pasco, hospital physician, made the presentation to Genevieve McKinley, Jacksonville; Marion H. Dunham, Griffin, Ga.; Macola A. Byrd, Griffin; Nellie Mae Roberts, Palatka; and Mary K. Middleton, Hastings. An interesting feature of the exercises was an address by Dr. Henry Hanson, State Health Officer, Jacksonville. Dr. Edward Jelks, attending physician at the hospital, presided.

* * *

Dr. Annette Bieker of St. Petersburg is spending the summer in Tennessee.

* * *

Dr. C. P. Bullard recently moved his offices from 215 Seybold Building to 2930 N.W. 8th Avenue, Miami.

* * *

Dr. Louis M. Orr of Orlando recently returned from a trip to New York where he attended the meeting of the American Urological Society.

* * *

Dr. E. A. Heibner of St. Petersburg spent the month of June at his old home in Kansas.

* * *

Dr. S. A. Clark of Lakeland returned in June from New York City, where he spent several weeks taking post-graduate work at the New York Lying-In Hospital and the Post-Graduate Medical School.

* * *

Mrs. T. W. Causey, wife of Dr. T. W. Causey of Lakeland, saved the lives of her two small boys recently while they were swimming in Lake Morton, when the older boy stepped into a hole and pulled the smaller boy in with him. Mrs. Causey, who was sitting on the shore, jumped into the lake to their rescue. The younger was unconscious when she reached him. The boys have fully recovered.

Dr. George E. Beckman was appointed as associate in the section of anesthetics of the Duval County Hospital medical staff at the meeting of the Duval County Welfare Board held in June. The appointment was made on recommendation of Dr. Gaston Day, chief of the section.

* * *

Miss Dorothy Driver, daughter of Mr. and Mrs. C. W. Driver, of 215 Beach Place, Tampa, became the bride of Dr. Joseph C. Inman, of Chattahoochee, at the home of Mr. and Mrs. Driver July 2, 1930.

The marriage ceremony was performed by the bride's cousin, Rev. W. J. Carpenter, of the First Methodist church of Largo, in the presence of relatives and intimate friends.

Dr. and Mrs. Inman left by motor car for New Orleans. They will be at home after July 15 at Chattahoochee, where Dr. Inman is a member of the medical staff of the state hospital.

* * *

Dr. C. C. Collins of Jacksonville recently returned after spending some time in the New England states, Canada, and Detroit, Mich., where he attended the meeting of the American Medical Association. He was accompanied on the trip by Mrs. Collins and his daughter, Frances, who are remaining in Waynesville, N. C., for several weeks.

* * *

Lieutenant-Colonel Raymond Sanderson of Jacksonville, has been ordered by the war department to report at Brookfield, Texas, for a month's active duty in the medical corps. Lieutenant-Colonel Sanderson will rank from date of May 17, 1930, and is to be relieved from duty by August 2, to return to his home.

* * *

Dr. and Mrs. Gordon H. Ira of Jacksonville are enjoying a vacation trip in the north. Dr. Ira attended the annual meeting of the American Medical Association held in Detroit, Michigan, June 24-27. Mrs. Ira, as a delegate from Florida, attended the annual meeting of the Woman's Auxiliary of the American Medical Association. Before returning home, Dr. and Mrs. Ira will spend two weeks visiting points on the great lakes and in Minnesota and two weeks in the Berkshire Hills in Massachusetts.

* * *

The many friends of Dr. O. W. Gardner of Greensboro will regret to learn of the death of his father, which occurred recently at Camilla.

PROCEEDINGS OF THE ELEVENTH ANNUAL MEETING OF THE FLORIDA RAILWAY SURGEONS' ASSOCIATION

The Eleventh Annual Meeting of the Florida Railway Surgeons' Association was held at the San Carlos Hotel, Pensacola, May 5, 1930.

The meeting was called to order at 2 p. m. by J. H. Pierpont, M.D., chairman of the local committee on arrangements. The invocation was delivered by the Reverend G. H. Rousseau, of the First Baptist Church, Pensacola. The Association was welcomed to the city by Frank G. Renshaw, M.D., District Surgeon, L. & N. Ry., Pensacola, and a response on behalf of the Association was made by L. M. Anderson, M.D., Lake City. The annual presidential address was then delivered by Harold D. Van Schaick, M.D., Jacksonville, the subject being "The Responsibilities of the Railway Surgeon." R. A. Woolsey, M.D., Chief Surgeon, Frisco System, St. Louis, Mo., honor guest of the Association, presented an interesting discourse on "Intra-Spinal Block."

At the scientific meeting of the Association, the following papers were read and discussed:

"Non-Union of Fractures"—J. D. Bell, M.D., Pensacola.

"Gunshot Wound of the Tibia—Report of a Case"—Z. Brantley, M.D., Grandin.

"A Discussion of General Principles Underlying Diagnosis and Treatment of Fractures"—J. S. Turberville, M.D., Century.

The election of officers resulted as follows: Gaston H. Edwards, M.D., Orlando, president; Carol C. Webb, M.D., Pensacola, vice-president; E. W. Warren, M.D., Palatka, reelected secretary and treasurer.

The next meeting will be held in Orlando on the day preceding that of the meeting of the Florida Medical Association, according to a provision of the constitution.

The following committees have been appointed by the president to serve for the ensuing year:

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J. Ralston Wells, M.D., Daytona Beach.
H. A. Leavitt, M.D., Miami.

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Walter C. Page, M.D., Cocoa.

NECROLOGY COMMITTEE

Geo. C. Tillman, M.D., Chairman, Gainesville.
John D. Peabody, M.D., St. Petersburg.
Leon A. Peek, M.D., W. Palm Beach.

COUNTY SOCIETY	SECRETARY	MEETINGS				Dues Paid.
		Date	Time	Place	Luncheon?	
Alachua	J. E. Maines, Jr., M.D., Gainesville.	2nd Tuesday	12:00 Noon	White House	Yes.	88%
Bay	Don S. Fraser, M.D., Panama City.					50%
Brevard	I. K. Hicks, M.D., Melbourne.	Varies		Varies		90%
Broward	Ralph Lingeman, M.D., Ft. Lauderdale.	2nd Tuesday	8:00 P.M.	Chamber of Com- merce	No.	75%
Columbia.....	T. H. Bates, M.D., Lake City.	1st Monday.	7:30 P.M.	Blanche Hotel		64%
Dade	E. N. McKenzie, M.D., Miami.	1st Friday	8:30 P.M.	Club Room, Huntington Bldg.	Occasionally.	77%
DeSoto-Hardee- Highlands ...	H. V. Weems, M.D., Sebring.		8:00 P.M.	Varies	Yes.	87%
Duval	Kenneth A. Morris, M.D., Jacksonville.	1st Tuesday	8:15 P.M.	Chamber of Com- merce Building	No.	68%
Escambia	J. M. Hoffman, M.D., Pensacola.	1st Tuesday	8:00 P.M.	Board of Health Building	No.	69%
Hamilton	J. R. Bruce, M.D., Jasper.					100%
Hillsboro	J. T. Cowart, M.D., Tampa.	1st and 3rd Tues- days	8:00 P.M.	Tampa Municipal Hospital	No.	79%
Jackson	C. H. Harrison, M.D., Cottondale.	2nd Tuesday	3:00 P.M.	Marianna	No.	64%
Lake	W. L. Ashton, M.D., Umatilla.	1st Thursday	12:30 P.M.	Eustis	Yes	100%
Lee	H. Quillian Jones, M.D., Ft. Myers.	3rd Friday	7:30 P.M.	Lee Memorial Hospital	No.	93%
Leon-Gadsden- Liberty- Wakulla- Jefferson	J. B. Brinson, Jr., M.D., Monticello.	Quarterly	3:00 P.M.	Varies	Yes.	85%
Madison	Geo. O. Davis, M.D., Madison.					
Manatee	A. Q. English, M.D., Manatee.	1st and 3rd Tues. Oct. to May; 2nd Tues. May to Oct.	7:00 P.M.	Dixie Grande Hotel	Yes.	92%
Marion	Thos. H. Wallis, M.D., Ocala.	3rd Thursday	12:30 P.M.	Harrington Hotel	Yes.	80%
Monroe	W. R. Warren, M.D., Key West.	1st Sunday	9:00 P.M.	Varies	Yes.	
Orange	J. R. Chappell, M.D., Orlando.	3rd Wednesday	8:30 P.M.	Varies	No.	67%
Palm Beach ...	R. G. Lewis, M.D., W. Palm Beach.	2nd Monday	8:00 P.M.	Court House	Yes.	66%
Pasco- Hernando- Citrus.....	Geo. R. Creekmore, M. D., Brooksville.	2nd Thursday	7:00 P.M.	Varies	Yes.	92%
Pinellas	O. O. Feaster, M.D., St. Petersburg.	Every other Friday	8:00 P.M.	500 Power & Light Bldg.	No.	69%
Polk	Herman Watson, M.D., Lakeland.	2nd Wednesday in Feb., Apr., June, Aug., Oct., Dec.	1:00 P.M.	Lakeland	Yes.	94%
Putnam	E. W. Warren, M.D., Palatka.	2nd Thursday	7:00 P.M.	James Hotel, Palatka	Yes.	60%
St. Johns	A. C. Walkup, M.D., St. Augustine.	3rd Tuesday	8:30 P.M.	Varies	Yes.	85%
St. Lucie-Okeech- bee-Indian River-Martin ..	C. L. Davis, M.D., Okeechobee.	3rd Thursday	8:00 P.M.	Varies	Yes.	100%
Sarasota	F. C. Metzger, M.D., Sarasota.	2nd Tuesday	8:30 P.M.	Varies	Occasionally.	75%
Seminole	J. T. Denton, M.D., Sanford.	2nd Friday	8:00 P.M.	City Hospital		100%
Sumter	W. E. Mitchell, M.D., Coleman.	2nd Tuesday		Varies	No.	
Suwannee	W. C. White, M.D., Live Oak.					67%
Taylor	R. J. Greene, M.D., Perry.	Last Thursday	12:15 P.M.	Eldorado Cafe	Yes.	60%
Volusia	J. Ralston Wells, M.D., Daytona Beach.	2nd Tuesday	7:30 P.M.	Varies	Yes.	78%
Walton- Okaloosa	A. G. Williams, M.D., Lakewood.	3rd Thursday	8:00 P.M.	Varies	Occasionally.	100%
Washington- Holmes	H. A. McClure, M.D., Chipley.					56%

NOTE—Secretaries: Please submit information to complete the above schedule.

THE WOMAN'S AUXILIARY PAGE

WOMAN'S AUXILIARY
TO THE
FLORIDA MEDICAL ASSOCIATION, INC.

State Editor
MRS. EDWARD JELKS,
2244 St. Johns Avenue
Jacksonville

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At the annual meeting of the Woman's Auxiliary of the American Medical Association, held in Detroit June 23-27, Florida's state organization was splendidly represented by our president, Mrs. J. Ralston Wells of Daytona Beach and two delegates, Mrs. Gordon H. Ira of Jacksonville and our past secretary-treasurer, Mrs. Rufus Thames of Milton. We are expecting excellent and inspiring reports from this meeting which we hope to publish in the August issue of the Journal.

COMMITTEES

The by-laws of the National Auxiliary ask that each State Auxiliary request the State Medical Society to appoint a committee of five members to act as an advisory committee to the State Auxiliary. Dr. Davis has appointed the following committee:

Dr. Frederick J. Waas, Chairman, Jacksonville.
Dr. J. Harris Pierpont, Pensacola.
Dr. J. E. Taylor, DeLand.
Dr. J. S. McEwan, Orlando.
Dr. W. W. Massey, Quincy.

Mrs. Wells announces the appointment of a committee on Revision of the Constitution and By-laws:

Mrs. J. J. Spencer, Chairman, St. Augustine.
Mrs. M. A. Lischkoff, Pensacola.
Mrs. H. C. Dozier, Ocala.

HYGEIA

Mrs. Herrman Harris, chairman of this committee, is striving to have as many health programs as possible throughout the state this year. This month she has the following to report: On

June 5th, Dr. Upchurch, City Health Officer of Jacksonville, spoke to the Duval County Auxiliary. At the last meeting of the Parent-Teachers' Association of the Panama and Brentwood Schools, Dr. Harris spoke on the "Early Diagnosis of Tuberculosis."

VOLUSIA COUNTY

The Volusia County Medical Society and the Woman's Auxiliary closed a successful year with their annual picnic at DeLeon Springs. The supper which was arranged by the Auxiliary was served cafeteria style. There was a good attendance of members and their families and everybody seemed to enjoy the outing.

DUVAL COUNTY

The Duval County Auxiliary held its last meeting until next October on June 5th at the Jacksonville Chamber of Commerce building. The two outstanding features of this meeting were an excellent reading by Mrs. W. S. Manning of a sketch of the life of Dr. Alvan Wentworth Chapman and a talk on health by Dr. N. A. Upchurch, City Health Officer. The article on Dr. Chapman was written by Miss Winfred Kimball of Apalachicola and published by the New York Botanical Journal in 1921, Vol. 22, No. 253. Dr. Chapman practiced medicine many years at Apalachicola and was at the same time a great botanist. He was among the first to make a study of the flora of that part of Florida and was the first botanist to discover and classify the rhododendron which is found growing in that part of the state. Grey, the famous botanist, who was friend of Chapman's and visited him at Apalachicola, named this species "Rhododendron Chapman" in honor of its discoverer.

The talk on Health, by Dr. Upchurch, was most enlightening and instructive. Few present had realized the scope of the work of the City Health Department.

In the report of the meeting at Pensacola, the Duval County Auxiliary was particularly proud and also deeply appreciative of the honor accorded it at the state meeting where its president, Mrs. S. E. Driskell, was elected president of the State Association for 1931.

Summer Diarrhea

The following formula provides a means of supplying the principal fuel utilized in the body for the production of heat and energy and furnishes immediately available nutrition well suited to protect the proteins of the body, to prevent rapid loss of weight, to resist the activity of putrefactive bacteria, and to favor a retention of fluids and salts in the body tissues:

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The usual custom is to give one to three ounces of this mixture every hour or two until the stools lessen in number and improve in character. The food mixture may then be gradually strengthened by substituting one ounce of skimmed milk for one ounce of water until the amount of skimmed milk is equal to the quantity of milk usually employed in normal conditions. Finally the fat of the milk may be gradually replaced, but as milk fat is likely to be digested with much difficulty after an attack of diarrhea it is good judgment to continue to leave out the cream until the baby has fully recovered.

Further details in relation to this subject and a supply of samples of Mellin's Food sent to physicians upon request.

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TUBERCULOSIS ABSTRACTS

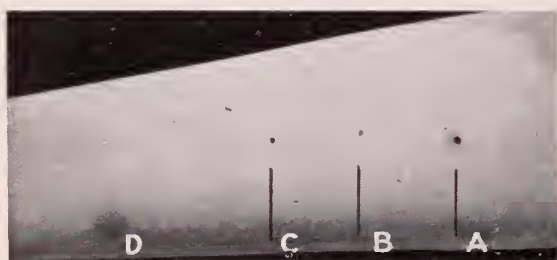
A REVIEW FOR PHYSICIANS

ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

Early European statistics, based largely on studies of groups suspected of having tuberculosis and living in populous cities, created the impression that all adults and nearly all children reacted positively to the tuberculin test. For that reason, the value of the test was unjustly discounted. Infection is not so prevalent in this country, especially among children, and since the tuberculin reaction is a very simple measure and furnishes a base line in the diagnosis of early tuberculosis, its value is being re-established. Charles Hendee Smith, from whose paper, "Tuberculin Skin Reactions," the following abstracts are derived, pleads for a more consistent use of the test, and at the same time emphasizes the need for greater precision in making and interpreting the test.

TUBERCULIN SKIN REACTIONS

Tissues which have once been sensitized by living tubercle bacilli develop the power to react to tuberculin. A positive tuberculin reaction means



Pirquet Reactions and Control
A—Pirquet positive, B—Control
C—Pirquet negative, D—Mantoux

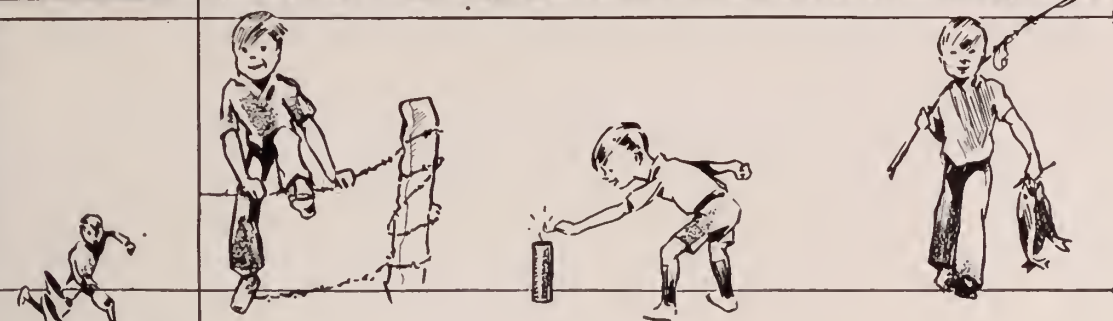
that the tubercle bacillus has lived and grown in the body. Koch introduced the general, or subcutaneous tuberculin reaction in 1890. In 1907, Pirquet developed the cutaneous scratch test, and the same year Wolff-Eisner and Calmette described the conjunctival test, while Moro gave us the percutaneous or inunction test. About a year

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Summer Outdoor Activity Greatly Increases Tetanus Cases

TETANUS occurs in every month of the year, but the danger is greatly increased during the warm months. Outdoor activity increases exposure to injury, and thus increases the number of burns, lacerations, punctures from splinters and nails, and cuts, abrasions and fractures. Exposure of any wound to street dirt or garden soil may be followed by tetanus infection. The burns which children sustain from fireworks during Fourth of July celebrations also cause many cases of tetanus.

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later, Mantoux introduced the intracutaneous test, and shortly after that Hamburger and Monti used the hypodermic, or "Stich" method. The object of each of these tests is to bring tuberculin into contact with the deeper epidermal cells and, therefore, the intracutaneous and "Stich" tests may be expected to be more accurate than the Pirquet and Moro tests.

PIRQUET TEST UNRELIABLE

Because of the simplicity of the technique, the Pirquet test has gained popularity and has been used in many countries as a routine procedure. But it has distinct disadvantages. If the scratch is too deep, the subsequent swelling may, to an untrained observer, resemble a positive reaction. A greater disadvantage is the uncertainty of the test because the tuberculin may not be kept in contact with the cells of the deeper layer of the skin long enough to excite the specific response. Many children fail to react on the first test, yet show a positive reaction when retested a few days later. This is not due to the raising of the sensitivity by the first test, for if two tests are made at the same time, one may fail while the other reacts sharply.

(Continued on Page 44)

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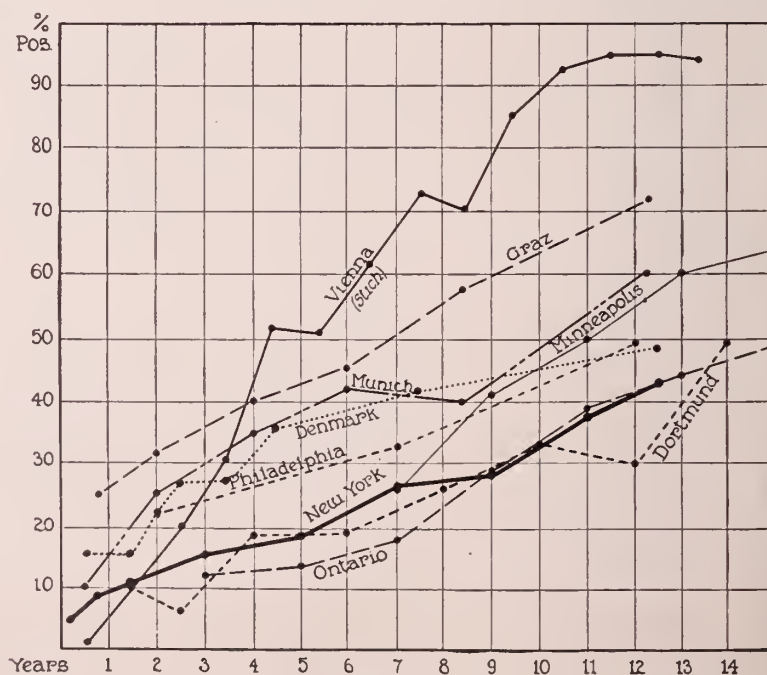
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The unreliability of the Pirquet test, says Smith, became manifest to those in the Children's Medical Division at Bellevue Hospital about ten years ago. The Mantoux reaction was adopted in the hope of finding a more accurate test. Immediately, it was found that many patients reacted definitely to the Mantoux test and failed to react to the Pirquet, although two of the latter tests were always done. This difference persisted year after year, and at about the same rate; *i. e.*, the Mantoux test giving about twice as many positive reactions as the Pirquet. For several years, both tests were performed on all children, but the Pirquet was finally dropped as a waste of time because of its uncertainty.

CAREFUL TECHNIQUE ESSENTIAL

After trying various dilutions, Smith found that 1:1,000 is the most satisfactory, stronger solutions (1:200, 1:100, or 1:10) being used if necessary to retest, though these stronger solutions should never be used for the first test as sloughing may result. Making up and keeping the solution is not difficult, but the usual precautions must be strictly observed and errors of technique must be guarded against. For example, a needle or syringe that has been used for tuberculin should never be used for the control nor for a Schick test, as tuberculin may remain active after boiling several hours and cause a reaction. Acute illness, especially if there is a high fever, may suppress the reaction. Severe tuberculosis, such as general miliary tuberculosis or a wasting, chronic disease, may obscure the reaction. The tuberculin must not be too old nor contaminated with bacteria or molds.

PIRQUET AND MANTOUX TESTS COMPARED

As a means of comparing the reliability of the Pirquet with the Mantoux test, 3,112 children (ranging in age from birth to 13 years) were given two Pirquet tests at the same time that the Mantoux was given. Seven and eight tenths per cent reacted positively to the Pirquet test, while

(Continued on Page 46)



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16.5% responded to the Mantoux. This confirms the opinion of others that the Pirquet test is unreliable and that epidemiological studies based on the Pirquet test are, for that reason, open to criticism. Smith has gathered and compared graphically the tuberculin test results of various groups of children in American and European cities. All of these inscribe so characteristic a curve or slope that it is quite possible to calculate the incidence of positive reactors at given ages in a given place. It is interesting that the curves for Vienna and Graz are distinctly higher than for other European cities and that all the curves of American cities are of about the same incidence. Not more than 40 to 50 per cent in the large American cities harbor the bacillus at puberty.

It must be remembered, concludes Smith, that "the army of the tuberculous is recruited from those infected in childhood" and "phthisis is the last verse of a song the first of which was sung in the cradle." These infected children, then, who carry tubercle bacilli in their bronchial nodes or elsewhere, are the ones who need early, correct diagnosis. The Mantoux test provides the means of making it. It should be used on every child who is underweight, anemic or languid or who has an unexplained irregular fever. These children with "tuberculous infection," so-called, have true incipient tuberculosis, latent or active. This disease is generally in lymphatic tissue, where it is easily encapsulated and where scar tissue does no great harm. Under intelligent, watchful care they usually do well. When the disease has involved more important structures, such as the lungs, bones or meninges, the damage is greater, the cure is more difficult or impossible, and the diagnosis has been made too late.—*Tuberculin Skin Reactions, Charles Hendee Smith, Am. Jour. of Dis. of Children, Dec., 1929, Vol. 38.*

(This review secured by the Florida Public Health Association from the National Tuberculosis Association).

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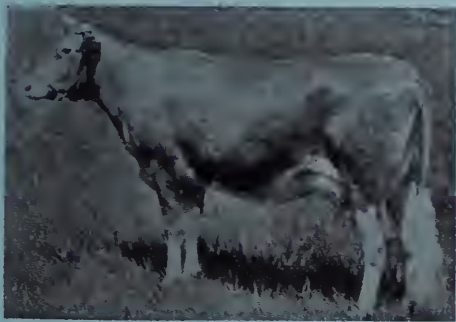
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THE JOURNAL

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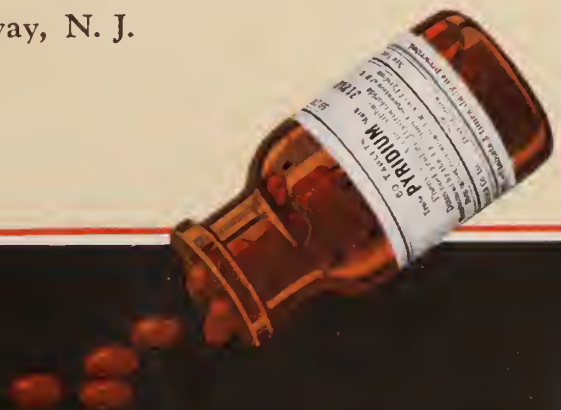


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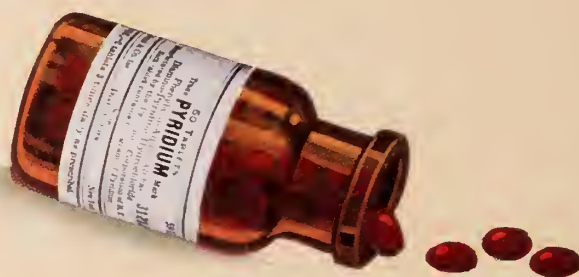
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NEWER METHODS IN THE TREATMENT OF NEISSERIAN INFECTION IN THE FEMALE*

J. M. BRYANT, M.D.,
Jacksonville.

In relation to all the infectious diseases of the female genito-urinary organs, the gonococcus possesses the greatest etiological importance both on account of its preponderant frequency and its tendency to produce chronic ill health and sterility. About ninety per cent of the female pelvic infections are gonorrheal in origin, and a large percentage of these result in chronic ill health or in sterility because of repeated infections and ill chosen methods of treatment. If nature were given a reasonable chance, gonorrheal infection would be a self-limited disease in many instances. This is particularly true of the infection in the fallopian tubes, and yet gonorrheal salpingitis is probably the most mismanaged of all the diseases that the profession is called upon to treat.

Progress in the treatment of neisserian infection in the female has been indeed slow, and end-results have been generally very unsatisfactory. Consequently, very little is being written upon the subject and apparently the profession, as a whole, seems little concerned over the results of a disease that cripples the health and seriously affects the future happiness of thousands of unfortunate young women each year.

It is a general observation that some of the older methods, such as douching, tamponing, vaginal instillation and surgical removal of the fallopian tubes still prevail as the treatments largely used, although such treatments have been found wanting insofar as the ultimate cure of the disease is concerned. A common site of the disease in practically every case of neisserian infection is the cervix uteri and if one will recall the anatomical and histological structure of this organ, it will not be difficult to realize the improbability of effecting a cure by the use of such superficial measures. To surgically remove the so-

called gonorrheal pus-tube during its initial infection, or during a subsequent attack without first employing the more conservative measures is, in my opinion, one of the most unscientific procedures that comes within the domain of modern surgery. Fully ninety per cent of patients suffering with acute gonorrheal salpingitis will make a spontaneous symptomatic recovery with no other treatment than rest in bed, and about ten per cent of these will have normal functioning tubes with subsequent pregnancy. The majority of these cases, among private patients, are observed in young married women who really desire to avoid sterility and who would gladly cooperate in carrying out conservative treatment if the advantages were explained to them, but who, on account of the severe pain that often accompanies these acute attacks, are easily persuaded to be operated upon. Therefore, the surgeon is almost always directly responsible for the course of treatment chosen and his conscientiousness and experience will be reflected in the management of each individual case.

Occasionally, of course, the surgeon is confronted with a more or less atypical case, one in which some other intra-abdominal condition is suspected and an exploratory laparotomy may be the only way in which an accurate diagnosis can be made. However, if during the course of the exploration uncomplicated gonorrheal salpingitis is found the abdomen should be closed without molesting the tubes. One is not justified in removing these tubes just because the abdomen happens to be open and because one feels he should be able to tell the patient he took out something. Almost anyone can remove a pair of acutely inflamed fallopian tubes, but it requires experience and judgment to leave such tubes unmolested. When one is really considering salpingectomy for gonorrheal salpingitis it might be of interest if he would consider the very great similarity between salpingitis and epididymitis. Who would be so thoughtless and unscientific as to remove the epididymis just because the patient developed gonorrheal epididymitis? Then if we

*Read before the 57th Annual Meeting of the Florida Medical Association, Pensacola, May 6, 7, 1930.

treat one conservatively the other, likewise, should so be treated.

Again, one should consider the therapeutic value of salpingectomy. What effect does it have upon the ultimate cure of the disease? There are seldom, if ever, any living gonococci in a salpingectomized pus-tube, and the tubes never become foci of the infection. Repeated attacks of gonorrheal salpingitis are either new infections or reinfections from an old focus in the cervix. Salpingectomy does not and can not cure a disease when its focus of infection is in some other organ. Therefore, to salpingectomize a patient just because she happens to develop gonorrheal salpingitis is permanently depriving that patient of valuable organs and at the same time leaving her with the same old gonorrheal infection.

In order to free a patient entirely of this disease it is necessary to determine all the foci of infection. Besides the cervix, Bartholin and Skene's glands may harbor the gonococci for a long period of time. If these glands are found to be involved they are easily accessible and can be effectively dealt with by the use of the actual cautery. If the Bartholin glands are acutely involved, wide incision and cautery will be necessary. The cervix is involved in practically every case of gonorrheal infection in the female, and gonococci are known to live in this organ for years without clinical evidence of disease either in the cervix itself or elsewhere. In order to gain access to the cervical glands which harbor the gonococci, the practically closed cervical canal must be made an open surface. This is done by splitting the cervix antero-posteriorly back to the internal os with the actual cautery after the method first devised by Burch. This must be done slowly so that the heat will not become sufficient to produce coagulation necrosis and subsequent sloughing of the cervical lips. The cervix is now packed wide open with gauze dressings saturated with ten per cent mercurochrome solution. This initial dressing is not disturbed for 72 hours. Thereafter it is changed and the parts irrigated with some hot antiseptic solution every second day. Should menstruation begin, the dressings and irrigations are discontinued temporarily and the patient is kept quiet in bed until menstruation is well over, when treatment is resumed and continued as before until healing takes place, which requires about thirty days. In order to avoid menstruation as much as possible, the time usually selected for cauterization is about one week fol-

lowing the menses, and even then menstruation is sometimes brought on. This work can be done in the office under low spinal anesthesia if the proper equipment and sufficient help are available.

Eleven cases make up the small series treated by this method. All cases were bacteriologically positive before treatment was instituted. Three cases were considered more or less acute, and complicated by acute bilateral salpingitis. Three cases were chronic with a history of one or more attacks of salpingitis, complicated by indurations and tenderness in both fornices. Three cases were acute with only the cervix uteri involved. Two cases were chronic cervical infections with a history of bilateral salpingectomies performed during an acute attack of salpingitis several years previously.

The three acute cases with acute salpingitis were put at rest in bed and at the same time the protein-shock treatment was given. This consisted of intramuscular injections of fat-free boiled milk every second or third day, beginning with three c.c. and increasing the amount by one to two c.c., depending on the reaction following the previous injection. The number of injections given in any case depends on the relief of pain, the return to normal temperature, and the amount of improvement as shown by the erythrocyte sedimentation test. At such time as the patient shows sufficient improvement, the cauterization is carried out as described above. As soon as the cauterized cervix is healed, the patient receives diathermy until all induration and tenderness disappears from the fallopian tubes.

Very extravagant claims are being made by some who use medical and surgical diathermy, but such claims are being generally discredited. However, if an efficient diathermy machine and an adequate supply of vaginal and abdominal electrodes are available, a great deal of benefit can be obtained by the proper application of diathermic heat. The patient receives a treatment twice each week for three or four weeks; longer if indicated. The first treatment should extend over a period of at least thirty minutes, and as the tolerance of the patient is increased, this time is progressively extended up to one hour or more. The patient takes an enema an hour or two before, and empties the bladder immediately before each diathermy treatment. Each treatment should be personally supervised and the length of each treatment, the milliamperage used, and the actual temperature as shown on the vaginal electrode

thermometer should be accurately recorded on the office records so they may be referred to at any subsequent treatment.

Contrary to certain claims that have been made, diathermy is not used with the idea that the heat obtained therefrom kills the gonococcus. By the time that diathermy enters into the treatment of these cases there very likely are no gonococci to be killed. The real value obtained by the use of diathermy is by increasing the local circulation and the attraction thereto of the defensive somatic forces. Diathermic heat naturally increases metabolism in the parts that are heated and it is a well-known fact that the macrophages of the reticulo-endothelial system are attracted to any area in which an increased metabolism is established. Therefore, if diathermic heat is correctly applied to the indurated masses caused by gonorrheal infection of the fallopian tubes, not only do these organs regain a normal state but this change is brought about much more rapidly than if less selected methods were employed.

The six patients of this series who had had salpingitis and who had induration and tenderness at the beginning of diathermy treatment, had absolutely no evidence of disease at the completion of such treatment.

Those of you who have had service in large institutions or active gynecological clinics are reminded of many cases of chronic gonorrheal infections with tubo-ovarian abscess, multiple dense pelvic adhesions, dysmenorrhea, and menorrhagia, who have passed beyond the bounds of conservative treatment and whose only hope of relief is that which radical surgery offers them. This type of case, of course, was not included in this series.

The treatment as outlined above applies more particularly to private patients who seek medical advice early in the disease and who cooperate fully in carrying out the details of the treatment. However, there is no reason why institutional cases can not receive this type of treatment provided their economical and social status permits of such management.

Of the eleven cases treated as outlined above, every patient received a 100 per cent symptomatic, clinical and bacteriological cure. While I am convinced that this newer method of treatment offers many advantages over the older and more orthodox ones, I, at the same time, realize that the series is too limited in number for its complete acceptance. I believe, however, that it offers a

decided improvement over the old methods of treating neisserian infection in the female.

DISCUSSION

Dr. W. F. Reavis, Waycross, Ga.:

I think Dr. Bryant has brought a very timely paper to our attention today. I have enjoyed the discussion of this particular subject as he brought it to us. We are all aware of the great number of women who are going around with a continual complaining of symptoms due to this particular condition.

Now, Dr. Bryant has given you eleven cases which he says are not conclusive of his particular line of treatment. I think the greatest thing he has brought you is thoroughness in treating these cases. We physicians are prone to treat gonorrheal conditions in the female, in a certain number of cases, without the patient being aware of what she has. It is very easy for a married man to infect his wife, and to keep peace at home, which is naturally what most men are anxious to do. We go ahead and treat these patients without notifying them and getting thorough cooperation regarding the disease. As soon as the patient begins to feel better (she may even feel well) or the discharge has lessened, and the doctor has not brought out the exact condition, this patient will stop coming to the office. She is not taught and trained that this condition is more or less of a chronic nature in the beginning and should be treated thoroughly over a long period of time until entirely well. Now, what happens? They develop a chronic gonorrheal activity and the deeper structures or focal points are involved. They then belong in the class of, as Dr. Bryant classified them, chronic gonorrheal conditions.

Regarding salpingitis: I know that the majority of surgeons have at numerous times opened the abdomen for an acute appendix and been surprised to find an acute salpingitis. In certain types of attacks in the right side, it is very hard to differentiate a salpingitis from an acute appendix. You get a blood count very similar—a little higher in acute salpingitis, and the pain is probably a little bit more excruciating than the average appendix, and more sudden in onset. The patient is frequently taken with acute pain at night. Very often the acute symptoms of salpingitis are brought on following sexual intercourse. During the night or immediately after, you get a history that the patient had sexual intercourse and imme-

diately following that had acute pain, and they, of course, were convinced that she had appendicitis. It is very hard to differentiate—so often the appendix is low down. If the case has had adhesions, we ought to make a thorough study. As Dr. Bryant has brought out in this timely paper, thoroughly treat these patients, and if possible save the natural organs of the body.

I want to take this opportunity to thank each and every one of you. I have had a delightful time here, and almost want to live down here with you. I thank you.

Dr. R. B. McIver, Jacksonville:

For a long time we have been convinced that any treatment of neisserian infection in the genital tract in the female, whether acute or chronic, and whether it be strictly a neisserian infection or whether complicated by a mixed infection, that leaves out cauterization of the cervix is incomplete.

On the service some time ago at St. Luke's Hospital, we checked over a number of returned cases which had been subjected to laparotomy primarily for salpingectomy and which later came back because of persistent symptoms. Many still had positive smears from the cervix. At that time a cauterization of the cervix had not been routine.

It is remarkable how large inflammatory processes in the tubes will clear up if handled conservatively. We recall one case in which a palpable mass reached to the umbilicus. That case was checked over by Dr. Field and Dr. Holden. The patient was handled conservatively for a good many weeks, after which time examination failed to find any mass, the uterus being freely movable.

In cases of new infection we believe cauterization of the cervix should be carried out promptly, and conservative treatment followed. In mixed infection or chronic recurring infection, we agree with the essayist that these are cases for radical surgery.

Dr. J. M. Bryant, Jacksonville (concluding):

There is not much more to say, except a word about the follow-up of the cases that have been treated with wide incision of the cervix and diathermy. I have been unable to get in touch with all these cases in recent months, but so far two of them have become pregnant. One patient had a self-induced abortion at two months, the other patient is now well on the way to giving birth to a child.

SPIDER POISONING—FROM THE BITE OF THE LATRODECTUS MACTANS, OR BLACK WIDOW SPIDER*

HENRY E. PALMER, M.D.,
Tallahassee.

I am presenting this paper with the hope of interesting the medical profession in a subject about which the average practitioner knows very little. Much of my information will be excerpts from writers who have had more or less experience in dealing with spider poison. My experience in treating the cases under my care, agrees in the main with what I have gathered from the literature bearing on the subject.

"The *Genus Latrodectus Mactan*, or notorious Black Widow Spider, is very common and widely distributed in the southern states, but has been found as far north as New Hampshire. It is probably the only poisonous spider in the United States. It is shiny, coal black, and usually brilliantly marked with red or yellow, or both. A bright red patch, shaped like an hour glass on the ventral surface of the abdomen is the most constant mark, the others varying greatly. The female, always the one to bite, is, when full grown, usually half an inch long, but may spread its long legs as much as two inches. The globose abdomen resembles a black shoe button, although it may have one or more red spots along the middle of the back, and over the spinnerets, in addition to the ventral patch. The male is much smaller than the female, and is even more conspicuously marked, having four stripes along each side of the abdomen, in addition to the marks of the female.

The young spiders, much lighter in color, mature in about 40 days. The Black Widow, as it is called from its custom of eating its mate, is usually found alone, as it will engage in mortal combat with any other spider placed near it. It builds a coarse and irregular dark web in dimly lighted places where it may be undisturbed. Occasionally, it is found under stones, or pieces of wood, or in holes in the ground, in old stumps or bushes, more often in the rafters, and corners of little used buildings, in the basements and attics of unfrequented houses and in the dark corners of barns, and other outbuildings, and it is frequently seen in outdoor toilets, where it builds its web across the toilet seat."¹

*Read before the 57th Annual Meeting of the Florida Medical Association, Pensacola, May 6, 7, 1930.

"Little is positively known about the specific nature of the venom of spiders, although there has been much speculation. The venom is an oily, translucent, lemon yellow liquid having an acid reaction, and a hot bitter taste. It gives the xanthoproteic reaction, and is rendered harmless by heating to 90° C.

In many ways, the symptoms of spider poison resemble those produced by snake poison, so that it is probable that spider venom belongs to that class of poisons. It is known that snake venoms are very complex mixtures, and that they differ greatly in different species of reptiles. Among the ingredients that have been found are fibrin ferment, and anti-ferment, proteolytic enzymes, cystotoxins for red corpuscles, and neurotoxins, as well as leucocytes, and endothelial cells. The marked effect on the nervous system produced by the bite of the black spider, *Latrodectus Mactans*, and other species of the *Latrodectus* indicate that the venom of these insects resembles that of the cobra more nearly than the venom of the American snakes."²

"To report from monographs of Brazil and Vellard, the venom of *lycosa raptoria* is devoid of any systemic action, and produces a very marked local swelling followed by necrosis of the skin, while the venom of *Ctenus nigriventer* causes opposite effects on the organism, viz., intense pain, low pulse and temperature, muscular contraction, cramps and convulsions, sweating and anuria. (Almost identical with the symptoms produced by the venom of the *Latrodectus Mactans*. H. E. P.)"(a).

"Kobert believes that all parts of the spider contain a toxalbumen which, in some species, is mixed with a secretion of the poison gland. He considers that the secretion of the poison gland produces only local symptoms, while the general symptoms are due to the presence of this toxalbumen. It is because of the toxalbumen that the bite of the *Latrodectus* is so severe as to occasionally cause death in human beings. It contains a hemolysin called *Arachnolysin* which acts on the red cells of man, rabbit, mouse, and goose, but not on those of the horse, dog, sheep, and guinea pig. Some authors question whether the nervous symptoms following spider bites may not be due to changes in the blood rather than a direct toxic effect on the nerve tissues."³

Dr. Coleman writes interestingly and feelingly about experiments upon animals and himself with the venom from the *Latrodectus*. The dissected

poison glands of one female *Latrodectus* containing the venom was macerated, and mixed in ten drops of distilled water. This was injected subcutaneously into the abdomen of an eight-months-old cat. In about five minutes a series of convulsions set in of a clonic type, quickly followed by tonic spasms, and in ten minutes the animal was dead. A quantity of the *Latrodectus* eggs were macerated in twenty drops of distilled water, and diluted up to 10 c.c. The injection of this solution into an eight-months-old cat produced the same symptoms, and death in about three minutes. A rabbit was killed in 2½ minutes.

For himself, Dr. Coleman prepared an extract of the poison from the gland of the female *Latrodectus* as follows: The poison glands were dissected out. The sac contained a very small drop of white viscid liquid. The sac, and contents were macerated in ten drops of distilled water. To this he added 100 grains of sugar of milk. It was then further reduced so that one grain of the powder represented 1/1000 of a grain of the venom. The first day he took two powders, (1/500 gr.) every hour during the day for ten doses. At the end of ten hours no change was felt, other than a decrease of heart action to 64. No powders were taken during the night. The next day after 15 powders had been taken, heart action fell to 60 with a slight dull occipital headache. The bowels did not move at the regular morning hour. When twenty powders had been taken, the heart action was 54, occipital pain very severe, with cramping pains extending from the chest to the abdominal muscles, pupils slightly dilated, and some distress about the heart. "Again no powders were taken during the night, but I was very restless, and could not sleep. Continued the powders the third day, and stopped when the 25th powder had been taken. The heart rate was 48, temperature 99, very severe headache, clonic spasms of the chest, and abdominal muscles, marked distress about the heart, with radiating pains extending to left armpit, and down to elbow. Had no bowel movement for two days. Pupils markedly dilated. It seemed a perfect picture of angina pectoris. The symptoms gradually subsided and in three days I felt normal. After an interval of two weeks, the experiment was repeated, resulting in the same symptoms, and condition."⁴

Dr. T. J. Turpin of Esmeralda, Mexico, was bitten by a Black Widow Spider with the following experience: "The bite is distinctly pain-

ful, and produces swelling. The spot bitten is so small that it is hardly noticeable next day. After the first hour, there is no noticeable local symptom, but within a short time after the bite there is intense pain in the chest, palpitation of the heart, and difficulty in breathing. I was the victim of such a bite, and I have seldom had more severe pain. I have never thought myself in more danger of death than I did the two days that I was ill, during which I felt it necessary to take nearly a grain of morphin with atropin. None of my cases seemed as severe as my own, though several patients were sick for two days."⁵

"Prof. W. J. Baerg of the University of Arkansas writes most interestingly of his experience from the bite of a Black Widow. He voluntarily submitted to being bitten by it, and was very ill for two or three days. He experienced the usual symptoms which I shall relate later. In summing up his opinion of the toxicity of the poison, he said, the evidence presented proves that the bite of the Black Widow is likely to cause decidedly unpleasant, and under certain circumstances, dangerous results. The place on the body where the bite takes place is an important factor, also the susceptibility of the person, and the dose of poison received. I believe that a large dose of the poison injected in the neck will cause a local pain so severe that the victim will hardly retain consciousness."⁶

Dr. C. Hart Merriam in his volume, "The Dawn of the World, Myths, and Weird Tales Told by the Newan Indians of California", states that the Northern Mewuks say: "Po'Ko-Moo, the small black spider with a red spot under his belly is poison. Sometimes he scratches people with his long fingers, and the scratch makes a bad sore." Dr. Merriam adds: "All the tribes know that the spider is poisonous, and some of them make use of the poison. Whenever I have questioned the Indians about this spider, in California they uniformly rank it with the rattlesnake poison. To poison their arrows they mash the spider, and rub the points of the arrows in it. Sometimes this is the only poison used. The venom apparatus consists of a pair of glands in the cephalothorax, or one in the basal segment of each chelicera, from each of which a duct leads to a small opening near the tip of the chelicera of the same side. This opening is so placed that it is not closed by the pressure of the bite, but allows the venom to flow into the wound. The poison glands are two in number, and are situated in

the true spiders in the anterior part of the cephalothorax."⁷

The Los Angeles General Hospital Series:

"Fifteen patients have been treated for poisonous spider bites at the Los Angeles General Hospital in recent years. They were all males, ranging in age from 2 to 65 years, but more than half were young adults. Most of the bites happened in the evening or early morning in the summer or early fall. The spider was located in a toilet in eleven instances, in a factory once, and in bed once. Most of the patients had seen the actual spider, which they described as black and shiny, and several mentioned a red spot on its belly. The bite occurred on the penis in ten patients, the scrotum in two, the back in two, and the abdomen in one. Local signs consisting of one or two tiny pink or red spots were found in eight cases, and local symptoms in that region, after the first momentary prick, were complained of in five. The chief symptom in every instance was pain. This was described by seven patients as severe; by three patients as continuous or aching; by two patients each as sharp, dull, stinging, cramping, or doubling up, and by others as considerable, great, burning, throbbing, cutting, tingling, shooting, rheumatic, or generalized. The pain was located in the legs in eleven cases, and in the abdomen in nine, but was also in the chest, back, arms and penis in five cases each, and in the groin in three cases, and all over in four. Perspiration, restlessness and vomiting were complained of by seven patients; constipation by six; nausea by four; difficulty in breathing by three; dizziness, chills, urinary retention, incoordination and edema of the face and legs by two, and hiccough, thirst, and cough by one patient each. Thirteen patients appeared to be in agony on admission. Cyanosis was seen in five; the pupils were dilated in two, were small once, and irregular once, and a heart murmur was heard in one. The abdomen was rigid in twelve patients, but tender in only three. The knee jerk, and other reflexes were over active in seven cases; tremors and twitching were found in four, and priapism was noted once. The pain appeared immediately in six cases, within a quarter of an hour in six others. It reached the maximum severity within a quarter of an hour in three cases; in an hour in five cases; in two hours in three, and in four hours in two. Three patients were seen at the hospital within two hours after the bite; four within six hours; five within twelve hours, and the others within 48 hours.

The diagnosis was not made definitely at the time of admission in the first five cases admitted, perhaps because we were not then familiar with the condition, for there has been no hesitancy in recognizing the last ten cases, eight of which occurred within the year 1925.

"The differential diagnosis included infection following insect bite, an acute surgical abdominal condition such as ruptured gastric ulcer or acute appendicitis with peritonitis, renal or gall stone colic, food poisoning and lobar pneumonia.

"Eight patients had a subnormal temperature at the time of admission, but in nearly all a mild fever developed during their hospital stay, in six instances reaching 100 F. or more, but no case going above 101.6 F. The pulse was generally retarded as compared with temperature, being below 72 in half the patients on admission and falling below 66 in the majority during their first few days in the hospital. The respiratory rate was generally slightly accelerated on admission, but soon came down to 20, which was the average rate during the remainder of their stay in the hospital. Two patients had urinary retention requiring catheterization on the day of the bite, and almost all were constipated, going one, and in six cases two, days without bowel movement.

Hypertension was found in every patient examined, the blood pressure averaging 150 systolic, and over 87 diastolic on admission. Repeated readings, however, showed a rapid drop, the systolic averaging only 136 on the day after admission. Urinalysis showed a trace of albumen in three cases, with hyaline or granular casts in four, pus cells in three and indican and blood in one case each.

"Leukocytosis was present in almost every case, averaging 14,761 in the nine cases examined on the day of admission, 11,600 in the five cases examined on the second day, 10,720 in the four cases examined on the third day in the hospital, the highest count being 21,000 on admission and the lowest 5,900 several days after the bite. There generally was a relative polymorphonuclear leukocytosis, averaging 80 per cent in the eight cases recorded. The red blood cell count was not constant, averaging 5,000,000 in the seven cases recorded, with an average hemoglobin estimation of about 85 per cent. Altogether more than sixty physicians saw these patients while they were in the hospital. More than 150 cases of poisonous spider bites have been reported by thirty-three physicians in the United States during the last

century. Two-thirds of these occurred in California, but the others were scattered over more than a dozen states, including Florida, Virginia, Georgia, North Carolina, Alabama, Texas, Oklahoma, Maryland, Pennsylvania, Tennessee, Ohio, West Virginia and Arkansas. More than 80 per cent of the victims were males, and the majority were bitten on the penis or adjacent parts while sitting in an outdoor toilet; others on the hands, feet or other exposed parts. All ages have been reported. A minister and a college professor have not been spared, but most of the victims were farmers or rural laborers, as might be expected from the habitat of the spider. Most of the bites occurred either in the early morning or in the evening in the summer or autumn, but this was not the invariable rule, as cases have been known in almost every month in the year. The spider actually causing the bite was captured and identified by arachnologists in about a dozen cases, but usually it was described as a shiny black spider, and a red spot on the abdomen was frequently mentioned.

"A stinging or sticking sensation was noted at first, but this soon disappeared, and except for a tiny red spot sometimes seen, there was no mark or swelling to indicate the location of the bite. In less than half an hour, however, the characteristic pain appeared, increasing in severity for several hours. It has been vividly described as intense, violent, agonizing, exquisite, excruciating, griping, cramping, shooting, lancinating, aching and numbing, and either continuous, and incessant, or paroxysmal and intermittent. It was felt in the abdomen and generally also in the legs, back, chest and 'all over', less often in the head, shoulders and arms. The pain spreads from the site of the wound by continuity; thus, the patients bitten on the penis usually have pain in the groin and then in the abdomen, while those bitten on the wrist have pain in the arm and then in the chest before it reaches the abdomen, suggesting that the venom spreads by the lymphatics and acts in the muscles rather than in the central nervous system. The final distribution of the pain, disregarding the order of development, however, appears to be fairly uniform, irrespective of the site of the initial lesion, and the pain in the abdomen and legs follows the bites of the wrist or back just as regularly as it does those of the penis or ankle.

"In addition to the acute pain, which was evidenced in most cases by writhing, rolling, doub-

ling up, muscle spasms and paroxysmal contractions, many other symptoms were described. The most common in the order of frequency, include profuse cold sweats, restlessness, anxiety, difficulty in breathing, anorexia, nausea and vomiting, constipation, cyanosis, delirium, prostration, shock, insomnia, speech disturbances, and acute urinary retention. Tremors, twitching, paralysis, convulsions, localized swelling of the bitten part or of other tissues, chills, dizziness, priapism, jaundice, and macular skin eruption were also encountered. An extreme boardlike rigidity of the abdomen was the most striking of the physical findings, but abdominal tenderness was rarely mentioned. Circulatory disturbances, evidenced by cyanosis and an unduly slow or rapid pulse were often noted, but actual figures were lacking. The patients were usually seen by the physician within a few hours after the bite, but the diagnosis was not always made at once, and in several instances the patient was operated on by mistake for an acute appendicitis or other acute abdominal disease, while biliary or renal colic, acute pancreatitis, perforated gastric ulcer, and various forms of poisoning were suggested in others.

"The most acute symptoms lasted a number of hours, no relief being felt for more than six hours in half of the cases reported. The pain then generally subsided in from twelve to forty-eight hours after the onset, but complete ease was not often secured for more than a week and many complained of weakness and recurring pains for many weeks thereafter.

"There is a widespread impression that *Latrodectus Mactans* may cause death, and indeed this is not improbable. About ten deaths have been definitely ascribed to the bite of *Latrodectus Mactans* in the United States but only a few of them have been described in detail. The records fail to show any of these cases coming to necropsy."⁸

TREATMENT.

"Treatment at the General Hospital has consisted mainly of 1. Sedatives such as morphin, or codein, hypodermically, given in larger doses than usual to secure results, bromides, chloral, barbitol, and hot baths frequently repeated. 2. Stimulants, such as aromatic spirits of ammonia, caffein, and strychnin. 3. Eliminative measures to secure free purgation, magnesium sulphate, enema, and catheterization, when necessary. Specific serum treatment has been tried with encouraging results. Twenty centimeters of

the blood were taken from a patient who had recovered from a severe poisonous spider bite, and injected intramuscularly into a man who had just entered the hospital in an agony of pain from a bite. He improved following the injection, and three other cases treated likewise all felt relief much quicker than without such treatment. Those receiving this treatment within a few hours obtain the quickest relief."⁹

"J. Vellard and V. Brazil have for the last five years been engaged in the preparation of specific antivenins for the most widespread species of spider in our southern section. They have found that *Lycosa raptoria* and *Ctenus nigriventer* are responsible for the majority of cases of arachnoidism observed in Sao Paulo.

"Sheep are used in the preparation of the antivenins, and immunization is carried on by means of hypodermic injections of the antigens carefully diluted in saline, given in properly increasing doses from 0.1-mgm. to about 75-mgm. in a period of approximately 3 to 4 months. A bivalent antivenin, specific for the sting of both *Ctenus nigriventer* and *Lycosa raptoria* has also been prepared from the blood of sheep immunized with the venom of these species.

"The curative potency of these antivenins has been clearly demonstrated on human beings stung by these two forms of spider prevalent in south Brazil. Immediately following the injection, all patients show signs of improvement. As with other sera, it has been found that the earlier this treatment is applied the more rapid and complete its action is. Rapid recovery has been the outcome of this form of serum therapy in every instance. The principle of specificity between venom and antivenin also holds good."^(b)

A resume of my personal experience:

I have treated six cases of spider poison caused by the bite of the *Latrodectus Mactans*. I am positive of their identity because all saw the little black spider with the red spot on its belly. The patients were five males and one female (four white and two colored) ranging in age from 8 to 50 years. All except one resided in the rural districts. The location of the bite had no bearing on the severity of the symptoms. In fact, a man fifty years old, bitten twice on his leg below the knee, suffered greater pain, and was longer getting over it, than the 8-year-old girl who was bitten on her hand.

There was very little if any swelling at the place bitten; in fact, you could scarcely see the

place of entrance. The pain at the time of bite is so insignificant as to cause no inconvenience, and the pain is only felt as the venom begins to enter the circulation. The pain and suffering are agonizing. The fear of impending death is almost overwhelming, the patient begging most piteously, and continuously for relief. One patient as he entered my office, cried out: "Do something for me, Doctor; if you don't I will be dead in five minutes." Afterwards in describing the agonizing pain, he said his heart felt just as if a strong man were gripping and squeezing it with all his might.

All the symptoms, and sequellæ, so graphically described by Dr. Bogen, except priapism, were present in my cases. For weeks they complained of numbness, or lack of feeling in soles of feet, with a loss of general muscular tone, and disinclination to engage in any work. My cases suffered intensely for four or five days, requiring repeated hypodermics and morphine for relief, and rest from the agonizing pains. It is the most horrible suffering I ever witnessed, excepting that from tetanus. Spider poisoning presents so vivid a clinical picture that once seen, will never be forgotten. When you see one case, you see all. Many cases have been mistaken for attacks of appendicitis, kidney or gall-stone colic and similar abdominal diseases. A careful examination and history of the case will enable you to make a correct diagnosis. I have collected about twenty authentic cases of spider poisoning treated by physicians within a radius of fifty miles of Tallahassee, Fla. The ages of these patients ranged from early childhood to old age. I know of no authentic death from spider poison in this section. Morphin, hypodermically, in large doses, repeated as necessary, is the only dependable drug for relief of agonizing pain, and cramping of all muscles. Antispasmodics, like bromide, chloral, and barbitol, are useless until the pain and cramps are beginning to subside. Hot baths should afford some relief. Serum treatment is the rational one, and will be used when it becomes available.

I wish to especially thank Dr. Emil Bogen for a copy of his prize essay, "Arachnoidism", published in 1926. He writes most graphically and interestingly of his experience with this not so rare disease, which you may be called upon at any time to diagnose and treat. I am passing around a few of the live demure, retiring, but

belligerent little Black Widows, so you may know what they look like.

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DISCUSSION

Dr. J. H. Pierpont, Pensacola:

I have never had a case of spider poisoning as described by Dr. Palmer. I think that he has had my name placed on the program more as a compliment to me than with the thought that I can add anything to the paper. I think it is one of the most complete and interesting papers I have ever listened to. Of course, as he described the spider, it is a very common spider and I have seen it often. But as I have said, I have never been called upon to treat a case. I think there is no question but that this paper should be put in the class of monographs with its complete history and description of this particular spider, including all of the symptoms incident to the infection produced by the spider.

Dr. J. S. Turberville, Century:

I just want to relate a personal experience. It is very hazy in my memory, but I was bitten by a spider like Dr. Palmer described when I was a child about five years old. I have never forgotten that night. It happened this way: Back in those days little boys wore boots, and an old discarded boot had been thrown out in the back yard. One day I found this old boot and put it on. I felt a sting, took the boot off and shook it, and the spider fell out. There was a little red spot on the back which I remember just as clearly as can be. That is the only time that I have ever been unconscious in my life. Just a little while before I became

unconscious I vomited. I remained unconscious practically all night. The next morning I felt quite well. In the meantime they had had a doctor, but I do not remember anything he did. The next morning, as I said, I felt quite well and decided to get up. And when I got up I fell. It was way into the afternoon before I was able to stand on my feet. I remember that very clearly. I do not remember just how long it was after the bite, but I became unconscious pretty soon. And I do remember the terrible aches before I became unconscious. It was so painful and so distressing that it made an indelible impression.

Dr. Toulmin Gaines, Mobile, Ala.:

A number of years ago a man came to me with one side of his lip very much swollen, saying that a spider had bitten him during the night, that he had seen it and killed it. The swelling subsided in a few days but a few months later he came to me with exactly the same condition, saying another spider had bitten him. This made me very suspicious of his statements as he had seen and killed the first spider and now another had bitten him in the same place. I later realized that it was a case of angeo-neurotic edema. Patients often think a localized swelling is due to a spider bite when as a matter of fact it is a form of urticaria.

Dr. Henry E. Palmer, Tallahassee (concluding):

I am very glad Dr. Gaines brought out that point. It is a good point. The way to differentiate the diagnosis is this: In a spider bite there would be no local inflammation or irritation, no more than in a mosquito bite. In fact, in most cases inflammation is so slight that those bitten pay no attention to it until the acute and severe symptoms start.

Now, the point I want to impress upon you surgeons is the rigid boardlike condition of the abdominal muscles, simulating acute "surgical abdomen" as you men call it. The mistake has been made of going into the abdomen expecting to find a gangrenous appendix or perforating ulcer or something of that kind when if you give the patient a hypodermic of morphine or something to relax the muscles you will find no local tenderness nor other symptom of acute abdominal trouble.

FRACTURES OF THE OUTER END OF THE CLAVICLE—A SIMPLE DRESSING*

G. H. EDWARDS, M. D.,
Orlando.

Fractures of the outer end of the clavicle may, like Gaul, be "divisa in partes tres" and thus classified when they come to treatment; for the amount of displacement or deformity at the seat of fracture with its other characteristics, depends, for a great part, upon the portion of the clavicle in which the lesion is located.

Speaking of clavicular fractures in general, Lester¹ says, they are the next most common fractures that come to treatment, being second only to Colles' in incidence. So much has been written regarding their treatment that Kreisinger², writing in 1927, found descriptions of over two hundred devices for their treatment. Most of these come under the head of reducing dressings; that is, dressings designed to reduce the fragments and to hold them in alignment. Nearly all authors from Hippocrates to date admit that permanent reduction and positive alignment is almost impossible to maintain and as a consequence some deformity is bound to occur. Eliason³ says that ambulatory dressings are generally unsatisfactory, as regards comfort and anatomic perfection and a certain amount of deformity is to be expected, although function is almost universally all that could be desired and the deformity tends to subside in time. The multiplicity of methods point to the unsatisfactory state of such fixation.

With these facts in mind, the value of complicated uncomfortable dressings is questionable. Certainly, in cases of incomplete fracture, or fractures without displacement, there can be no doubt that many of these dressings, if applied, would be somewhat of a nuisance, both to the surgeon and to the patient. A supporting dressing disregards the position of the fragments and merely aims to make the patient more comfortable and it would seem to be the logical dressing to use, especially where displacement is slight. A simple sling which makes no attempt at reducing the fracture or holding it reduced, does support the weight of the arm and keep it from a wide range of motion, thereby eliminating the two chief causes of pain and discomfort arising from the injury.

*Read before the 11th Annual Meeting of the Florida Railway Surgeons' Association, Pensacola, May 5, 1930.

Conwell⁴ says that when good position of a fracture of the clavicle is present without a joint complication, it is best treated by the simplest of ambulatory dressings. He also says that perfect anatomic position is not always necessary for perfect functional results. It is very doubtful whether the average ambulatory dressings hold a fracture of the clavicle in position if the fragments have a marked tendency to be displaced. Any ambulatory dressing that would hold a fracture of such a type in place usually would have to be applied so tightly, that grave danger to the circulation would result, as well as great pain and discomfort to the patient.

It would seem that two hundred methods of treatment and devices were enough, so it is almost with an apology that I come before you with yet another one. When I left college, I had an idea that all fractures of the clavicle must be treated with a Sayres dressing, or some modification thereof and I used it religiously and applied it firmly, so as to hold the fragments in place, much I fear to the discomfort of many of my patients. But for over twenty years I have used the method, I will describe, with confidence and success in certain types of clavicular fractures of the outer third and also in acromioclavicular dislocations.

As the rivers Garunna and Sequana partitioned Gaul, we have the conoid and the trapezoid ligaments, which are contiguous and when described together, called the coracoclavicular ligament, dividing the outer third of the clavicle into its three parts. The behavior of the fracture, as to displacements, deformity and discomfort and types of dressing best suited, varies greatly, depending upon the portion in which the lesion is located.

In the fractures of the outer third, internal to these ligaments, the proximal portion, as to position, is influenced by the muscular contraction of the sterna cleidomastoid, pectoralis major and subclavicular muscles while the distal portion is displaced by the weight of the arm and the pulling of the trapezius and deltoid muscle fibers. These like the fractures of the inner and middle portion of the clavicle are probably best treated by one of the numerous methods of reduction and restraint; the selection being made with the thought in mind of giving the maximum amount of support in correction of the deformity, with the minimum amount of discomfort.

Fractures in the middle portion, as a rule show very little displacement unless the injury producing it is of sufficient violence to tear the ligaments in two, which is very uncommon, and I feel are best cared for by the use of a simple sling or the dressing I will describe.

The fractures externally to these ligaments are the ones with which I am dealing more specifically and for which I believe my simple dressing is most admirably suited, as it gives both support, and relief from pain and tension, and allows of some motion and yet while holding firmly does not produce much constraint or discomfort.

These fractures of the acromial end are next in order of frequency to those in the shaft and they arise from direct violence as a rule, that is a blow on the extreme end of the bone, as from a sledge hammer, dredge bucket, railroad accident, ball club, or from falls in which the point of the shoulder strikes against a building, tree or sidewalk, all of which I have seen produce it. I have seen two instances of this fracture in individuals falling with the arm held in such abduction, that the humerus was driven almost directly upward. This type of accident, however, is more apt to produce a fracture in the middle portion of the outer third in which location there is usually very little displacement due to the conoid and trapezoid ligaments, which are not easily ruptured. In one which I saw fractured by this means, the external fragment was resting upon the longer internal portion giving a most curiously shaped deformity but with the first effort toward reduction, the outer fragment was released and it dropped down below the rest of the bone, its outer end being tilted somewhat downward and slightly forward, due to the weight of the arm and the pull of the deltoid muscle. This is the more common position in which we find the arm, when the acromial end is broken off and that is the type for which my dressing is especially adapted.

A dislocation at the acromioclavicular articulation presents the same picture or type of deformity of the shoulder as this fracture of the outer end of the clavicle, that is the acromial process from the weight of the arm is pulled downward and often tends to ride slightly under the clavicle, due to the pull of the deltoid and pectoralis major muscles, the trapezius muscle not being strong enough to overcome this pull.

CASE HISTORIES

In describing the dressing, I will report but two cases, both of recent date and of which I have both X-ray pictures of the fractures and also photographs of the dressing as applied.



CASE I.—A colored man employed in a fertilizer warehouse, with a sack of fertilizer on his right shoulder, attempting to walk up a short flight of steps, stumbled and, over-balanced, by the weight on his shoulder, fell forward, striking the tip of the left shoulder on the edge of the top step. He came to me with the characteristic posture of a clavicular fracture, supporting the arm and elbow of the injured side, by the hand and forearm of the sound side.

A picture was taken immediately and revealed a comminuted fracture. A downward tilting of the extreme end and a number of small fragments of bone at the site of the fracture were noted. With little discomfort and without anesthetic, the patient being seated on a stool, with the fist of my left hand in the axilla pushing the humerus slightly outward and with my right hand at the elbow, the fragments were brought into direct line, almost perfect approximation. To maintain this position, I took a strip of adhesive plaster, about a yard long and three and a half inches wide and with the patient's forearm at right angles with the arm, the radius being above, one end of the adhesive plaster was stuck to the anterior surface of the forearm, brought forward over the ulnar aspect of the arm just missing the tip of the olecranon and passed over the posterior surface of the forearm

and upward on the anterior surface of the arm, the middle of the plaster passing over the site of the fracture and then down the back as far as the lower end of the scapula of the opposite side. Under the adhesive plaster, at the site of the fracture, is placed a small pad of gauze or cotton and the same may be placed between the plaster and the olecranon. The adhesive plaster should lie smoothly on all the surfaces without wrinkles and should stick on the back where it would naturally fall following a direct line from the forearm over the shoulder and down the back. The application is well illustrated by the photographs.

CASE II.—A twelve-year-old school girl while skipping rope missed her stride, was tripped by the rope and fell forward, striking on the extended abducted arm. This, as I mentioned before, is a very unusual means of acquiring this type of fracture. She felt a sudden pain in her right shoulder, but continued to use her arm for an hour or two rather gingerly; the pain finally becoming so great, that she was brought to my office. She presented the characteristic posture



of the fractured clavicle, the arm of the injured side being supported by the hand and arm of the other side. The dressing as described in Case I was applied. The patient left the office, standing nearly erect and experiencing great relief and comfort from the support given.

"This dressing you see is very simple. The adhesive under the forearm holds the arm up to whatever position it may be lifted, so that the

fracture is very nearly perfectly approximated. The portion of the dressing across the shoulder over the site of the fracture with the weight of the arm drawing down on it, acts as a splint keeping the two ends from slipping by each other. The fulcrum, as you note, is the attachment of the adhesive plaster on the back, thus you see the plaster has a dual function, lifting the arm up, bringing the bones into approximation and yet keeping the outer fragment from being raised too high, by its pressure at the site of the fracture. This dressing, as you note, in addition to support and immobilization of the fragments, does not hold the arm or forearm in marked constraint and the arm can be pulled forward and moved slightly laterally with but little motion at the site of the fracture. To complete this dressing: the sling, triangular if you desire, may be adjusted, or, which I prefer in the tropics, a simple loop of four-inch bandage around the neck, in which the hand and wrist is supported.

Salient features of this dressing:

Its simplicity.

Its ease of application.

Its support of the embarrassed arm.

Its splint-like action at the site of fracture.

Its limitation of range of motion.

It permits some mobility at shoulder, elbow and wrist joints.

And last, but not least, its comfort.

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THE RESPONSIBILITIES OF THE RAILWAY SURGEON*

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It is an honor, indeed, to have been your president during the past year and one for which I am sincerely grateful. This gratitude will, in a measure, be expressed by the brevity of these remarks.

While it is true all railway surgeons are physicians, all physicians are not good railway surgeons. In the normal relationship between physician and patient, the physician has two main responsibilities: firstly to the patient; secondly

to himself. Railway surgeons have a third, that to the railway company.

The first responsibility deals with three factors:

1. Complete examination of the patient, preferably at the first visit, or at the first opportunity under favorable circumstances. We are all aware of individuals receiving treatment for major injuries such as crushed limbs, etc., and later, oftentimes too much later, secondary untreated injuries discovered which in the final analysis are as disabling as the originals. The physician, however, is not always to be blamed, as frequently the situation is so critical as to preclude further examination, or other extenuating circumstances may exist. However, we must be on our guard at all times.

2. Conscientious and skillful treatment during the illness or period of disability. This includes necessary consultation when additional skill is available, hospitalization for the proper length of time and necessary laboratory and X-ray studies. In this connection, it is well to remember that there are occasions when a secondary X-ray study will reveal what the first failed to do.

3. Proper after-treatment which consists mainly of occupational and physiotherapy. This service in such types of cases as fractures, palmar abscesses, etc., begins almost immediately when the patient is presented and continues until the ultimate has been attained. However, the close co-operation between the physician, dietitian and physiotherapist is essential. The necessity for this part of the care of patients has not been in the past sufficiently stressed or practiced. Billings recently stated that probably not more than five per cent of surgeons use physiotherapy after operations. This is also proved by the fact that it was only in February of 1929 that the first national meeting devoted exclusively to the subject of convalescent care was held in this country. It is well to mention here that there is a growing conviction in the minds of many men that its wider intelligent use, under the guidance of the physician, would be a powerful factor in curbing the practices of many cults.

If a slight digression may be permitted for the moment, it might be well to recall that as early as 1640 the Hotel Dieu and Charite in Paris had convalescent wards to the extent of one-third the hospital bed capacity attached to them. It was only in 1929 that the first convalescent home was subsidized in such a center as New York.¹

In the United States, the hospital bed capacity has about reached the point of saturation, there

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being one bed to each 130 individuals, of which but sixty-seven per cent are actually in use. The improvement in hospital facilities in the future should be along the line of convalescent wards or homes. In England, there are twenty-two convalescent beds to each 100 acute hospital beds as compared with none to eight per cent in this country. It has been estimated that \$100,000,000.00 annually could be saved by proper convalescent care. However, this indifference to the saving of man-power and money is not surprising in a country that permits almost 100 deaths and 1,000 permanent disabilities daily from automobiles with scarcely an effort made to check the slaughter.²

The second responsibility of the physician, that to himself, is expressed again by the thorough examination of the patient and the keeping of a complete permanent record of such findings. These should not be unduly long and time-consuming but should be descriptive and accurate. We must remember that a record of any patient may be of value and assistance many years later. A patient entered a modern hospital where he was examined, X-rayed, operated, died and post-mortemed. At the trial it was impossible to state from the record accurately the exact location of the injury or just where the operation had been performed.

The third responsibility, which concerns the railway and industrial surgeon, is that to the employer. In the early 19th century, certain workmen's lives were held so cheaply that inquests were not even held in mine disasters.³ This, fortunately, has changed and the time is rapidly passing when the companies desire an advantage over the employees, but seek only what is right for them and for the patient. If we could only, as physicians, by some unusual feat of imagination place ourselves impartially in the position of the employee and the employer and see the situation through their eyes as they see it, many difficult problems would be solved and prospective court litigation avoided.

In conclusion, permit me to call attention to a responsibility not previously mentioned that affects all of us practically every day of our lives, and that is the responsibility of one physician to another.

A noted, rather pessimistic philosopher once stated that in his opinion the sum total of all human unhappiness far exceeded the sum of all human happiness. So let us in our daily contact with each other look with a somewhat kindlier and forgiving eye and speak in a softer and gentler

voice of the efforts of our brethren and thus from day to day do our best to prove the old philosopher was wrong.

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CARDIAC PAIN*

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"Cardiac pain" is a rather ambiguous term but here I am referring to patients who complain of pain in the region of the heart where a differential diagnosis must be made between disease of the circulatory apparatus and other conditions which cause discomfort in that portion of the chest. It is not within the scope of this paper to give a detailed and classical description of all the diseases mentioned but I will try to present a brief differential diagnosis.

In many instances, the conditions which cause the patients to become alarmed can be readily differentiated from serious heart diseases. Superficial infections of the chest wall, injury to the ribs or excessive strain in athletics without proper training usually require a relatively brief examination in order to determine the cause of the complaint. Some nervous individuals, who for some reason have developed a fear of heart trouble, palpate the precordia so frequently that a superficial cellulitis is produced which actually becomes tender to pressure. I have seen precordial pain in acute dilatation of an apparently normal heart in athletes who attempted unusually strenuous events without proper training. Among the other affections of the anterior chest wall which sometimes cause a patient to fear heart trouble is tenderness of the sternum. This may exist without any known cause but the frequency with which it occurs in subacute bacterial endocarditis, leukemia and Hodgkin's disease makes it necessary to rule out these affections in every patient who complains of this condition over a long period of time.

Certain individuals, especially those of middle age or later in life, complain of precordial pain not unlike true angina of effort, or perhaps of a more mild degree, and a careful inquiry into their personal habits reveals the fact that they are excessive users of tobacco. Many of these individuals are of Semitic descent. Authorities

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differ as to the cause of pain in this class of patients but they do agree as to the existence of the condition. Many firmly maintain that the use of tobacco in itself cannot produce pain in a normal vascular system. This is a point that can hardly be definitely settled as there is no positive way to determine coronary sclerosis in the early stages. At any rate, abstinence from the use of tobacco cures the pain. In a like manner, individuals with a metabolic error resulting in a high uric acid content of the blood not infrequently have precordial pain which may resemble angina pectoris. This is classed as angina of gout by some authors regardless of the absence of arthritic manifestations. A diet that will reduce the uric acid content of the blood frequently gives these patients relief from pain. Dr. Thayer has repeatedly stressed the fact that some individuals have precordial pain when anemic, the pain disappearing when the blood becomes normal. Here, again, there is an opportunity to argue about the possibility of some early disease of the coronary circulation that has not advanced to such a degree as to produce symptoms but with the added burden of anemia produces anoxemia of the heart muscle.

Every physician is familiar with true angina pectoris of effort. The first attack usually accompanies exercise immediately after a meal and lasts only a few minutes. As time goes on and the attacks become more frequent the duration may increase to perhaps fifteen minutes but usually are characterized by their shortness of duration and immediate relief by the patient coming to an absolute standstill. Some patients state: "the pain stops when I freeze in my tracks." The pain is usually substernal, radiates to the arms, especially the left one, involving the ulnar side of the arm and the little and ring fingers. Occasionally the pain stops at the wrists or at the elbow. The character of the pain is described in various ways by different patients. It is usually described as a "grabbing," "grasping," "vise-like shutting down in the chest," "an iron claw holding the heart" or as an intense pressure. Sometimes, it is felt as an iron bar across the entire upper chest. More rarely it is described as "a sense of oppression." The face is pale, pinched and anxious. Sometimes the skin is covered with drops of cold perspiration. The pulse, respiration and blood pressure are usually not disturbed. Typical cases of angina pectoris may also be initiated by a blast of cold air in the face, stepping from a very hot to a very cold room, washing the face in very cold water and by emotional disturbances. Although

the first attack usually accompanies effort, subsequent attacks are very commonly preceded by emotional disturbance.

Coronary artery thrombosis is a condition which is frequently confused with angina pectoris of effort. In fact, there is no good reason why it should not be confused as the underlying pathology is in many instances only one of degree. Males are affected more than females, especially in the fourth and fifth decades. Three types of coronary artery thrombosis have been described:

1. Symptoms appear out of a clear sky.
2. Previous history of angina pectoris of effort.
3. Cases in which the coronary artery obstruction is only an incident in the course of an already existing heart failure.

The onset is sudden but is not always painful as many individuals die immediately without any apparent pain nor is the onset always dependent on effort as it frequently occurs when the patient is asleep. The pain is variable, often midsternal but frequently behind the lower end of the sternum or in the epigastrium. It is not affected by nitrites and lasts hours or days. It may recur in paroxysms over two or three days but with some pain of a less severe nature between the paroxysms of excruciating pain. Ordinarily, the pain is intense, squeezing and pressing in character, frequently radiating to the back between the scapulae, to the arms, neck or upper abdomen. The tendency for the pain to radiate to the upper abdomen has caused this dreadful malady to masquerade in the newspapers under the guise of "acute indigestion." Not infrequently, the epigastric pain is accompanied by vomiting and flatulence which make the differential diagnosis from gall-bladder disease, acute pancreatitis and perforated peptic ulcer a very difficult matter. However, there are always certain signs of circulatory disturbance which should not be overlooked. There is a degree of cyanosis that can hardly be explained by disease processes in the abdominal organs. Various degrees of dyspnea are present, the heart sounds are faint and sometimes irregular, the blood pressure is frequently low and there is evidence of edema of the lungs. One or two degrees of fever and slight leukocytosis usually exist. There is a feeling of intense prostration and morphine does not have as much effect on the pain as it usually does in gall-stone colic. The patient has the general appearance of shock. The skin is cold and clammy, the pulse weak and thready, not infrequently fibrillating. In some instances, the heart is abnormally slow, indicating a disturbance of

the conduction apparatus. With the above symptoms, if a previously high blood pressure suddenly falls to normal or below normal, there is certainly some lesion in the coronary arteries. Patients suffering with the pain of coronary artery occlusion are not fixed in one position as those with the angina of effort and frequently do not have the feeling of impending death although this symptom is variable. Occasionally, a pericardial friction rub is heard caused by the cardiac infarct and a systolic murmur may occasionally appear where one had not previously been noted. The engorged liver resulting from the acute heart failure may be very tender, making it especially difficult to rule out gall-bladder disease. The real difficulty occurs in cases that have both disease of the coronary arteries and gall stones or other abdominal lesions, as one seldom makes a diagnosis of two major conditions, each of which may produce the symptoms in question. Acute pneumothorax and massive collapse of the lungs may sometimes resemble coronary artery thrombosis but physical examination should immediately rule out these conditions. If the patient does not die during the immediate attack, the prognosis depends upon the amount of damage done to the heart and the type of life he leads. Many are bedridden invalids for a number of months and eventually die from heart failure while others, after many weeks in bed, reach a point where they can be moderately active and live a number of years. The occurrence of emboli in any part of the body after an attack of acute epigastric pain is very suggestive of coronary thrombosis.

In the treatment of this condition the usual rest, digitalis and venesection applied in heart failure are indicated. In addition to these measures, I wish to emphasize the importance of metaphyllin which has a remarkable effect in some cases by dilating the coronary arteries.

In almost the same class as coronary artery thrombosis we should mention the senile heart which is painful after a certain amount of exertion but does not produce symptoms like true angina. Most of these cases are due to early coronary sclerosis resulting in anoxemia of the heart muscle when the demand exceeds the amount of blood that can go through the smaller arteries.

So far as prognosis is concerned, the only difference in angina of effort, the senile heart which gives pain on moderate amount of exertion, and coronary artery thrombosis is one of degree. Eventually, the outcome is going to be about the same in each of these conditions.

In hypertension with general arteriosclerosis there is often substernal pain, perhaps more or less constantly present, occurring only on exertion or constantly present and made worse by exertion. Many, if not all of these cases, are due to the sclerotic, inelastic arch of the aorta.

Acute aortitis, whether from syphilis or from acute rheumatic fever, is profusely described by the French and commented upon very little by English, American and German authors. The pain in acute aortitis may resemble the angina of effort or be merely an attack of dyspnea with a sense of substernal oppression. Tachycardia and irregular fever are common findings. Physical examination usually reveals an abnormal supra-sternal pulsation, increased retrosternal dullness, systolic murmurs over the aortic area which are transmitted to the vessels of the neck and increased with the patient in the upright position or with the hands on the head, and the bell-like accentuation of the second aortic sound. Occasionally, there is tenderness of the sternum but this finding is quite variable. Acute aortitis is one of the few organic diseases of the heart causing pain in the precordia or substernal region of young adults. This is explained by the fact that it may be caused by acute rheumatic fever or occur soon after a primary syphilitic infection.

Aortic aneurysm may produce typical symptoms of angina pectoris but the pain may be paroxysmal instead of being initiated by effort or be a constant, dull, boring, deep-seated pain behind the sternum or in the interscapular region. The boring pain is especially noted when the aneurysm is eroding bony structures. Occasionally, the pain produced by an aneurysm is dull in character and aggravated by slight change in the position of the body. In advanced cases, root pain may be produced by the erosion of a vertebra. Ordinarily, the diagnosis or the suspicion of an aortic aneurysm should not cause any great difficulty. The variation in the blood pressure on the two sides, the variation in the size of the pupils, the vasomotor disturbance, the tracheal tug, increased retrosternal dullness, change in the character of the voice, the brassy cough, if present, pulsation or heaving of the precordia and the pulsation that can be felt when the chest is palpated with one hand on the spine and the other on the manubrium should at least make one suspicious of the pathology present.

Acute dilatation of the heart is usually accompanied by a sharp precordial pain but does not have the typical radiation of angina and does not

hold the patient in a fixed position. The diagnosis of such a condition should be easy.

The pain of pleurisy is seldom confused with a pain of cardiac origin. In some instances of chronic mediastinitis, both the pleura and the pericardium are involved. Here the lesion usually leads to fixation of the heart in a given position so that it does not shift with a change in the position of the patient. Pericarditis seldom causes acute pain but rather a sense of oppression or distress. Frequently, the disease is painless.

Extrasystoles, when very severe, may produce a sudden, violent, lightning-like stab in the precordia caused by the marked spasm of the heart muscle. In the mild forms the patient describes this sensation as "a shock," "a skip" or "that the heart turns over."

Neuralgia (intercostal, brachial or cervical) is not affected by effort. The pain is persistent and usually follows, to some extent at least, the pathway of the nerves.

Any type of root pain may be mistaken for pain of cardiac origin. Among the common conditions affecting the posterior roots are hypertrophic arthritis, tuberculosis of the vertebra, cord tumor and cervical tabes. In these cases, the pain may radiate to the front of the chest so that the patient is more conscious of the pain in the region of the precordia than elsewhere. In other instances, it is felt as a severe pain deep in the chest behind the heart and terrifies the patient as the degree of pain may be very severe. Any tumor mass in the mediastinum may give similar root pain or pain by direct pressure on the neighboring structures.

A patient with precordial pain will either make a diagnosis for himself of angina pectoris or "gas on the stomach." It is quite true that an excessive amount of gas in the stomach or intestines will give precordial pain by displacement of the diaphragm. However, no ordinary amount of gas will produce this condition and when it does cause precordial distress the pain is vaguely located in the epigastrium and lower precordia, does not have the usual radiation, is not affected by effort and is not relieved by the patient being perfectly quiet.

No part of the heart or circulatory apparatus can escape the ravages of syphilis. The aorta, of course, has a strange predilection to that affection but the myocardium itself is also commonly involved. When the aorta is involved the symptoms are usually those of aortitis, aneurysm or angina but when the myocardium itself

is affected one usually encounters signs of some degree of heart failure. Recently, I have had two cases of paroxysmal tachycardia caused by syphilis in which cases the nervous mechanism of the heart seemed to be involved. At this point, I wish to warn against the routine use of neoarsphenamine or arsphenamine in cases of cardiac syphilis. A positive Wassermann is not always an indication for the use of these preparations. As a matter of fact, when one suspects syphilis of the circulatory apparatus it is a direct contraindication to the use of arseno-benzol compounds. Treatment in these cases depends on the use of iodides, mercury and bismuth. Not infrequently, acute heart failure will follow the use of intravenous arsenic in syphilitic hearts. Only recently, Dr. Paullin, of Atlanta, reported a series of cases before the Southern Medical Association in Miami in which he described instances of sudden death in such cases. I have under my care at the present time a young man clinically presenting symptoms of paroxysmal tachycardia. His family physician discovered a 4 plus Kahn and gave him six injections of neoarsphenamine at intervals of seven days. Following this course of treatment, he had less lassitude and a better appetite but he complained of substernal oppression and distress on the slightest exertion for the first time.

It is certainly not easy in many instances to make a diagnosis of functional heart pain. In hypochondriacs and neurasthenics, where the most detailed study of the case reveals nothing to suggest organic disease of the heart and when the pain skips about from one part of the body to the other, one can be almost certain that the pain is functional. Not infrequently one can trace the origin of precordial pain in a nervous patient to a friend or relative who is actually suffering with heart disease. When a careful examination and reassurance gives relief it unquestionably is not organic. Pain of a functional type is usually described as "a heavy feeling," "a dead, dull ache" or "an occasional lightning-like stab." It does not hold the patient in a fixed position and is usually not affected by effort or by rest. Functional pain is seldom substernal but is localized near the apex of the heart. In some instances of hyperthyroidism the aggravated action of the heart will give rise to precordial distress. Such discomfort is functional in one sense of the word but is actually initiated by organic disease in another organ. Hypothyroidism is not infre-

quently a cause for heart failure but I have never seen it cause heart pain.

There is a group of atypical cases that have all the earmarks of being functional, patients that present no evidence whatever of organic disease and yet unexpectedly die as do those with advanced disease of the heart or coronary arteries. Fortunately, this is a very small group of cases. Every physician has seen such cases and will continue occasionally to see them. There is no method of examination, including the electrocardiograph that can entirely prevent mistaken diagnoses in these cases.

When greatly puzzled over any uncertain heart case, one sometimes feels that an electrocardiogram would clear up the situation. In a few instances this is true but I know many prominent internists who very seldom use this apparatus. It is the last link in the chain of evidence that one can obtain from the patient. In some instances, it verifies a clinical diagnosis while in other instances it gives suggestive findings which leave one more uncertain than he had been before. Over a period of four years I had electrocardiographic tracings made on every heart case that came on my service and from that experience I feel that one can practice very good medicine without the use of such an apparatus and that the absence of the apparatus does not prevent one from handling a heart case in a very intelligent manner. No mechanical apparatus can be substituted for judgment and experience.

LOCAL ANESTHESIA IN TONSILLECTOMY

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It has been my custom for several years when discussing anesthesia with prospective patients and their parents to advise local anesthesia for adults and children past the age 14 or 15 years. It is surprising to me how many people are willing to be put to sleep for an operation and in many instances without knowing anything about who the anesthetist is and very little about the surgeon who recommends or engages him. I find that most of my tonsillar patients, when they first begin to talk about this matter, say they must be put to sleep for the operation. Their reasons usually are, that they are very nervous and afraid that they cannot be still and may cause the operator to do something he should not do. Another reason is that they simply cannot stand pain and

they can scarcely conceive of an operation being done without pain.

To my mind, the local anesthetic for the adult is decidedly preferable. There is practically no pain and when the operation is finished the patient has no nausea or vomiting and no more pain following the operation than they would have had following a general anesthetic. My method of tonsillectomy in local work is always the blunt dissection. I find it much easier to locate the outline of the tonsil after a local anesthetic has been injected. This is particularly true if the tonsil is embedded or tightly adhered to the pillars as a result of old inflammations. It is much easier to dissect out with the patient in the sitting posture and with his cooperation than to have him asleep and in the recumbent position. I am able to get all the tonsil separated from the pillars and in most instances can remove all of it at one clip with the snare. If I do not get all of the tonsil at the first clip, then I am never quite sure whether I am getting tonsillar tissue or muscle tissue and my rule is to do all my dissection before attempting to remove any part of the tonsil.

It is my custom to use novocain and adrenalin, the latter to control bleeding, this being used in a very weak solution. If the tissues are too greatly blanched, bleeding will result and if patients are going to bleed I certainly want them to do it before leaving the operating chair or table.

Both tonsils are injected before beginning the operation for sometimes the patient will get nervous and want you to stop after one tonsil has been removed. If the other one has not been anesthetized it is sometimes difficult to get the patient's consent to proceed with the operation. It is not a good plan to ask patients if you are hurting them for if you are they will be sure to let you know. Besides, you know how it is when the dentist asks you if he is hurting. You always tell him "yes" or "not much" or "a little", or something to that effect.

I usually have my suction machine handy and use it just as I do in general work and, if necessary, tie off any suspicious bleeding points. In this, I believe, it is a little more difficult than if the patient were asleep.

There are many patients who are suffering from high blood pressure, kidney and heart lesions and in such cases I refuse to do a tonsillectomy unless it is done with local anesthesia. There is also the patient who has had part or all of his teeth removed and this makes it almost impossible to

use a mouth gag satisfactorily if the patient is asleep. Under local anesthesia, however, the difficulty is negligible.

Almost without exception, the patient returns to his room in as good condition as when he left it and usually expresses himself as being greatly pleased with the method used. There is little shock and the patient requires less after-care than if he had been given a general anesthetic.

Several times I have had occasion to do a local tonsillectomy and a general tonsillectomy in the same morning and by afternoon the one on whom the local was done is always ready to go home, but the one that had the general anesthetic never wants to leave the hospital. I might say at this point, however, that it is not a bad plan to have all of them spend the night in the hospital, for you can never be too sure that you will not have bleeding some time during the first 24 hours after operation.

You sometimes find a patient with such a sensitive throat that it is impossible to work satisfactorily in the throat. To eliminate this I spray a weak solution of cocaine in the throat and on the tongue and after some ten or fifteen minutes it is usually possible to proceed with the injection of the anesthetic and the operation without further trouble.

It is my custom not to permit the patient to have breakfast on the morning of the operation for the full stomach tends to make him gag and vomit more readily than if the stomach is empty. I have about reached the point when if the patient begins to vomit up food that I know was eaten for breakfast after having had strict instructions to the contrary, I do not operate that day but send him away to return another day.

There have been a few instances where I have done this work under local anesthesia when after I had started I realized that it would have been better to have given a general. Only in one instance have I ever had to change from a local to a general after injecting the anesthetic and even then I had about as much trouble with the patient, I believe, as I would have had if I had gone on with the local anesthetic.

In anesthetizing the tonsil I use only about four or five punctures, depending on the size of the tonsil, the points of insertion being between the pillars and tonsillar tissue and at the upper and lower poles. This will usually bring out the line of cleavage between the pillars and tonsils and enables me to follow this line with my dissector.

INTRASPINAL BLOCK*

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Spinal anesthesia has been in the making for the past forty-five years.

Corning, a neurologist, in 1885, in an attempt to relieve a severe neuritis by an injection of cocaine about the nerve roots, accidentally deposited some of the fluid in the spinal canal, getting quick relief from the pain. He found that the patient was not able to move his legs, and had lost all sensation below the injection. His first thought was that he had bungled, and produced a complete paraplegia. This entire picture cleared up in a few hours. The accident, however, was responsible for the investigation of spinal cord block as a surgical anesthetic.

Beir, in 1898, used cocaine dissolved in spinal fluid in a large number of cases, but found the immediate and after-effects highly unsatisfactory, quitting his investigations on the ground of its being entirely too dangerous, until such time as a substitute for cocaine with less toxicity be found.

Einhorn, in 1904, in his laboratory experiments, worked out a formula he called novocaine, which proved to be very much less toxic than cocaine. This gave spinal anesthesia a new impetus. Many investigations were carried on with rather indifferent results. Deaths, vascular disturbances, headaches, dizziness, etc., were very discouraging.

In 1925, Chen, a Chinese student at the University of Wisconsin, rediscovered an old Chinese drug known as ephedrin.

Ockerblad and Dillon, in 1927, found that with the use of this drug before spinal injection, the blood pressure was stabilized throughout the operation, thus removing a grave element of danger in the procedure.

Labat, Babcock, Koster and Pitkin, through a large experience, have developed techniques that have put the method on a firm foundation. There are two definite methods, that of Labat, and that of Pitkin. Both are satisfactory.

Labat uses an intramuscular injection of ephedrin five minutes before the spinal injection of novocaine crystals dissolved in the spinal fluid, and controls the degree and level of the anesthetic by the amount of novocaine used and the amount of spinal fluid removed, the amount to be removed depending largely on the spinal fluid pressure.

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which is in proportion to the blood pressure. The diffusibility is in inverse proportion to the fluid pressure.

Pitkin, in his experiments, produced a solution that he called spinocaine. The novocaine plus strychnine is suspended in an alcoholic starch solution which is non-diffusible and is lighter than spinal fluid. The anesthetic level is controlled by the patient level, plus, in high anesthetics, a procedure known as barbatoge, which has to do with mixing the spinocaine with spinal fluid through the withdrawal and return of spinal fluid several times during the course of the injection. Five minutes previous to the spinal injection, ephedrin with novocaine is injected at the site of the spinal tap. He employs two solutions in ampoules to produce what he calls controllable spinal anesthesia.

Ephedrin-novocaine contains in each 1 c.c. ampoule ephedrin hydrochloride, 5% and novocaine, 1%.

Spinocaine, in each 2 c.c. ampoules, contains novocaine 200 mgs., strychnine sulphate 2.2 mgs., in a special solvent of alcohol and water, with the addition of a starch combination that floats on top of the spinal fluid like the air bubble of the spirit level.

Introduced at the second lumbar interspace, Trendelenburg position, 15 degree tilt, the spinocaine reaches the lowest part of the canal and anesthetizes to the pubic level only. On the other hand, using the same interspace in a sitting position, the solution reaches the cervical region in ten seconds, as can be shown by coloring the solution methelyn blue.

The Pitkin technique calls for the prone position, the anesthetic level being controlled by the position of the table.

Ephedrin and strychnine preserve the vasomotor balance. Hypotension, shock, etc., call for more ephedrin. The Trendelenburg position reduces blood pressure.

Koster, in his series of 4,500 cases, reports 250 blood pressures so low during the operation that the manometer would not register. Experience has taught him that if the Trendelenburg position is maintained, the pressure will ultimately return, and no ill effects will be occasioned.

During the past two years, we have used the Pitkin method in 90% of our cases of surgery below the diaphragm. During the early periods of its use, we met with occasional failure due to faulty technique.

We found occasionally, in the upper abdominal work, such as gall-bladder and stomach, that a pull on the mesentery produced nausea. This was overcome by intravenous sodium amytal, which is now used routinely in upper abdominal surgery, being introduced after the anesthesia has been induced and the operation started. This drug is an antidote to novocaine and, if used before the introduction of the solution into the spinal canal, the anesthetic is a failure.

Preceding the operation, the patient is given luminal gr. $1\frac{1}{2}$ by mouth, insuring a good night's rest, pantapan gr. $\frac{1}{3}$ and hyoscin gr. $\frac{1}{100}$ are given one hour before the operation. Before the spinal puncture, the table is cranked to the proper tilt, depending on the level of anesthetic desired. The patient is placed in the proper position to keep the spine from sagging or rotating, with an acute bowing of the back, that the needle may be introduced into the canal at right angles to the skin.

Before attempting the spinal puncture, the skin and intraspinal ligament are anesthetized with the ephedrin and novocaine solution, using a very sharp small gauge needle and projecting the solution ahead of the needle. After allowing five minutes for the absorption of the ephedrin, the puncture may be made without pain by using the field already anesthetized. The needle should be of small gauge with a 45 degree beveled point to prevent the possibility of the lumen extending both intradural and extradural and allowing the spinal fluid to leak into the extradural tissue. A large needle, when withdrawn, would leave a hole in the dura that would not entirely close, also causing a leak.

The escape of spinal fluid into the tissues causes headaches. Morphine produces nausea. Both are controlled by Trendelenburg position. The patient's bed is lowered to normal level three hours after operation. Ten grams of sodium veronal by mouth $1\frac{1}{2}$ hours before operation will eliminate convulsions, due to faulty injection of novocaine into venous-plexus around the cord.

There appears to be no contraindications to this method of anesthesia except in cerebellar neoplasms. Heart and kidney complications are practically disregarded. Cases of blood pressure as low as 90/65 and as high as 220/134, have been operated without hesitancy on our part.

Spinal anesthesia, given properly, is sure, safe and comfortable both to the patient and the surgeon. It has all of the advantages of inhalation

anesthesia and none of its disadvantages. Pain is controlled and relaxation is complete. Lack of pain and nausea, early intake of fluids and foods shortening the convalescence make for better anesthesia.

It is our opinion that this method of anesthesia will supplant inhalation anesthesia in the large medical centers because of the operative and post-operative advantages, when properly given.

A DISCUSSION OF GENERAL PRINCIPLES UNDERLYING DIAGNOSIS AND TREATMENT OF FRACTURES*

J. S. TURBERVILLE, M.D.,
Century.

I take it for granted that all know what is meant when we speak of fractured bones. Therefore, I will not attempt a definition.

The principles underlying the diagnosis and management of fractured bones are essentially mechanical. As the skeleton is the framework of the body, and a locomoting frame, the parts are movable. These movable parts are activated by muscles which act as pulleys. A great many of the muscles almost have a parallel pull, certainly in many a very slight oblique pull. This tends in most of the long bones to cause over-riding, and shortening when fractures are complete and bowing when incomplete. Further the bones of the lower extremities, pelvis, and vertebrae in addition to the function of mobility are weight-bearing structures and this factor must be considered in their treatment when broken. Bones that are parallel and attached to each other, when broken singly, do not as a rule override or become greatly displaced. As the skull and vertebrae contain the brain and spinal cord, fractures of these are particularly important from the standpoint of injury to the enclosed structures and emerging nerves. Fractures about the joints often damage the synovial membrane and cause adhesions of the opposing surfaces; therefore, a principle in treatment of these is to keep the joint surfaces separated as much as possible until healing has taken place. The larger the bone the longer it takes to unite. Fragments of bone as a rule should not be disturbed, unless it is to bring them in closer contact with the main body. This is particularly true of the skull where it is often possible to replace fragments completely detached and get perfect union. The pericranium and en-

docranium do not reproduce defects in the skull; therefore, the importance of preserving and using fragments to fill defects is obvious. There are but few of the bones that can be held immobile by external appliances and at the same time preserve the integrity of blood and nerve supply. Really, perfect immobilization is not necessary. Traction and suspension with very little fixation is perhaps the best practice in fractures of the femur, pelvic bones and humerus. Internal fixation is ideal anatomically, but cannot be accomplished without trauma to the soft parts, and there is always liability to infection. Besides there is no device that can be employed that does not produce more or less damage to the bone from pressure. Therefore, the device often fails to hold the parts, or may by its presence, or by too complete fixation, cause non-union.

I think that there are very few instances where operative treatment is necessary. Perhaps oblique fractures of the tibia, fractures of both bones of the forearm where you cannot get the radius in line; transverse fracture of the femur, in angulation or in great shortening; fractures of the vertebrae that produce spinal cord compression; depressed fractures of the skull, or those accompanied by intra-cranial pressure; dislocated or badly fractured astragalus; and fracture of the patella in which there is much separation, should be operated upon. The indications are absolute for those mentioned of the skull, astragalus, knee cap and vertebrae, the others often debatable.

The X-ray has not been an unmixed blessing in the treatment of fractures. Failure to recognize its limitations, errors in interpretations, and errors in technique, have led to over-treatment in many instances, by those over-zealous for perfect X-ray anatomic restoration, or on the other hand to no treatment at all where no fracture was demonstrated, often in spite of disability that could not be explained in any other way. However, I think the X-ray is an indispensable adjunct.

At this point I wish to urge that every one use his own mind and skill in treating fractures. We have been led astray by the preaching of those who have become fanatics on the subject of standardization. Many of these think that fracture of the lower extremity cannot be treated without manufactured overhead frames or Thomas splints. The Thomas splint, unless well understood and carefully watched, can become an instrument of the greatest torture as well as of the greatest damage. The overhead frame

*Read before the 11th Annual Meeting of the Florida Railway Surgeons' Association, Pensacola, May 5, 1930.

can be fabricated in a few minutes from some scantlings with saw, drawing knife, vice, hammer and nails. Traction and suspension can be maintained with automobile inner tubes.

The light, well padded, well fitted, elastic board splint, is often the very best device one can use on certain fractures. It is easily applied, easily removed and lends itself easily to the principles of wedging fragments into position. Every fracture should be studied under the fluoroscope by gentle manipulation, into different positions to see which one brings the fragments into their proper relationship.

To be sure, a knowledge of the anatomy of the part is necessary. Take fractures of the elbow joint. The supracondylar variety with periosteum intact posteriorly (those that are usually produced by hyperextension) are usually best treated by acute flexion or Jones' position; those that are produced by falling with the arm under one, and the periosteum intact on the inner or anterior aspect will usually have the deformity exaggerated by acute flexion, and here the fragments are best maintained by treatment in extension with wedges on either side to prevent lateral deviation. Fracture of the olecranon process is usually best treated in extension, but if the line of fracture is low enough to leave all the sigmoid cavity on the upper fragment, dressing in extension will increase the deformity, by causing the lower fragment to slip forward past the articular surface of the humerus. However, if you flex the forearm or the arm the soft tissues in front of the elbow will act as a fulcrum and bring the fragments in much better position.

If the mechanics, in all fractures that are producing the deformity are well understood, usually a way can be found to at least partially overcome this, and get a satisfactory functional result. Often the displacement is not due to muscle pull so much as to swelling of the soft parts. Here gentle traction and awaiting the abatement of the swelling, is the very best treatment, whereas forcible replacement, before the swelling has disappeared, would lacerate the thickened edematous structures, and perhaps bring about disability much greater than that due to the bony deformity. In conclusion, I will say that in our desire for anatomic restoration, we should never forget blood vessels, nerves, muscles and contiguous joints.

DISCUSSION

Dr. R. A. Woolsey, St. Louis:

I heartily congratulate the essayist upon his interesting and valuable paper. It is both practical and denotes common sense.

To be a successful bone surgeon, one must not only know his anatomy but he must also be possessed with a mechanical turn of mind. In surgery a fracture means the breaking of a bone or cartilage. Our objective should be as complete a restoration as possible to normalcy in bone and function of the injured member. To obtain these we should always bear in mind the relation of bony parts, their functions, etc.

Every one should perfect himself in the examination of normal limbs by the ordinary methods of inspection, palpation, and mensuration. The examination of a fractured limb for deformity, abnormal mobility, and crepitus will then become more of a routine procedure, and the X-ray will then occupy its true position of confirming and amplifying a diagnosis previously made by other methods. It is not only essential to have a knowledge of the body landmarks, etc., of the normal limbs, but of the appearance of the various bones and joints at all ages.

Examination with the X-ray has added more to our knowledge of fractures than all other methods combined. There are three general points which may well be borne in mind by every one who sends a patient to have an X-ray examination made. The first point is that a negative examination with the fluoroscope should, if possible, be confirmed by a radiograph, since fractures with slight displacement may not be apparent to the eye. The second point is the necessity of making radiographs in both antero-posterior and lateral planes, in order to show how much deformity exists in both directions. The third point is this, that many cases of supposed sprain will be shown in a good radiograph to be cases of fracture.

Treatment: Successful treatment of any fracture accomplishes three things:

1. Reposition of the fragments; 2. Immobility of the fragments; and 3. Restoration of function.

These ideal results may be accomplished by whatever apparatus you are most familiar with, and can be most comfortably applied. By all means use the splint or apparatus that you can best apply.

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TECHNICAL EXHIBITS

Prior to 1929, the technical exhibits for our annual meetings were arranged for by the entertainment committee of the medical society and all proceeds obtained therefrom were used in assisting to defray expenses incident to the entertainment of the state meeting. In most instances, the members of the county society which arranged these exhibits were inexperienced in handling such affairs and could not give the time to the work which was necessary. As a rule, no effort was made to obtain exhibits until a few weeks or days prior to the meeting date. As a result of this, there were very few exhibitors. In some instances, firms which were not considered of the highest ethical standing were permitted to exhibit. The income from the exhibits, under this plan, was quite small.

In 1928, the executive committee of the Florida Medical Association decided that it would be

best for the business office of the association to arrange for and handle the technical exhibits for our annual meeting and that approximately two-thirds of the revenue accruing from these exhibits would be turned over to the entertaining society for the purpose of defraying entertainment expenses, and the remaining one-third would be turned over to the state association to defray expenses incidental to arranging for such exhibits.

At the 1929 meeting in St. Augustine, this plan of operation was put into force. A definite rate was made for floor space, booths were built, exhibitors were contracted for well in advance of the meeting. As a result of this arrangement, the revenue derived increased nearly two hundred per cent. Information has just been received from the Escambia County Medical Society that its pro rata revenue receipts from exhibits at the Pensacola meeting this year entirely paid for entertainment expenses. It would seem that putting the technical exhibits on a business basis is well worth while for the association.

ANNUAL SESSION AMERICAN MEDICAL ASSOCIATION

The meeting of the American Medical Association, held in Detroit June 23-27, was extraordinary, as evidenced by the material available in the fifteen scientific sections. Bye-the-bye, it may be of interest to state that the climatic conditions in Florida are very preferable to those of Detroit—believe it or not.

Needless to say, space will not permit a detailed report of any organization of the size of the American Medical Association. The Association now has more than ninety-nine thousand members, five thousand of which were registered in Detroit. There were more than one hundred fifty technical and quite as many scientific exhibits combined in the Masonic Temple, together with the scientific assembly.

The Michigan State Medical Society provided a past presidents' dinner which was given exclusively for the officers and members of the House of Delegates. The House of Delegates and the various other functions attended were of much interest to your representative.

As stated in the Journal, "The meetings of the House of Delegates were marked primarily by the demonstration of confidence in the Board of Trustees and by special interest in the economic problems affecting the progress of medicine today. Thus, resolutions concerning the care of Vet-

erans' legislation, federal aid on maternal welfare, mental hygiene and similar problems dominated the picture. It is significant that the resolution concerning aid for Veterans adopted by the House of Delegates was specifically referred to by the President of the United States in his message vetoing the Veterans' Bill."

By volume, the Florida Medical Association was not adequately represented. The medical records show that there are sixty-seven counties in Florida, twenty-one of which are not organized, and that there are seventeen hundred seventy physicians, with ten hundred ninety-three belonging to the Florida Medical Association and only five hundred forty-eight Fellows of the American Medical Association. The State Association is, therefore, entitled to two representatives in the House of Delegates. Only one alternate was in attendance at the Detroit session, as was the case in Portland, Oregon, in 1929.

Therefore, may this opportunity be taken to recommend to the several county societies as well as to the state organization that each and every eligible physician in the state be solicited and urged to become active members of their county and state societies and Fellows of the American Medical Association, for the good of the individual and of organized medicine in general.

Further, may it be recommended to the House of Delegates of the Florida Medical Association that inasmuch as the representative is of much importance only after having had an opportunity of attending this body for a number of years, that representatives be elected who will attend and continue in attendance for a long period of time.

STATE NEWS ITEMS

Dr. Lloyd J. Netto of West Palm Beach recently returned from Atlantic City, where he attended the national Kiwanis convention. He returned by way of Nashville, where he visited the Haggard Clinic and Vanderbilt Hospital.

* * *

Weekly clinico-pathological conferences have been inaugurated by the directors of the divisions of medicine and surgery at the Tampa Municipal Hospital. Surgical Division conference is held Monday noon and Medical Division conference is held Thursday noon. Visitors are welcome.

The regular quarterly meeting of the Florida Dermatological Society will be held in Tampa September 21. Dr. C. A. Andrews of Tampa is chairman of this Society and Dr. J. Frank Wilson of Jacksonville is secretary.

* * *

Dr. Banks H. Goodale and family, of Jacksonville, have returned from Jacksonville Beach, where they spent a pleasant vacation.

* * *

Dr. A. M. Steen, who has practiced in Palatka for a number of years, has recently given up his practice and returned to his former home in New Jersey.

* * *

Dr. J. T. Denton, of Sanford, recently returned from Saluda, North Carolina, where he attended the Southern Pediatric Seminar. Dr. Denton reports that approximately eighty doctors were registered for the course and that the lectures and clinics were most successful ones. He also states that there was an excellent representation from Florida. Following the Seminar, Dr. and Mrs. Denton visited in Asheville and Washington.

* * *

Dr. D. C. Main, of Crescent City, will spend the months of August and September vacationing at Daytona Beach and his plantation near Pomona.

* * *

Dr. O. G. Kendrick, of Tallahassee, spent the month of June attending clinics in New York.

* * *

Dr. and Mrs. H. Quillian Jones of Ft. Myers recently returned from a motor trip to Chicago, where Dr. Jones attended the national Rotary convention, following which he attended the American Medical Association meeting at Detroit.

* * *

Dr. Harry F. Watts of Ocala recently returned from a two weeks' visit to clinics in New York.

* * *

Dr. E. J. Melville and family of St. Petersburg are spending the summer at their country estate at Melville's Landing on Lake Chamberlain, near St. Alban's, Vermont.

* * *

The July meeting of the Brevard County Medical Society was held at Hotel Dixie, Titusville. Guests at the meeting were: Dr. J. Ralston Wells, Daytona Beach, district councilor, and Dr. W. A. Claxton, district health officer. Papers were read by Dr. I. M. Hay of Melbourne and Dr. W. J. Creel of Eau Gallie.

Dr. C. Gordon Merrick has recently returned to Ft. Myers, where he expects to practice.

* * *

Dr. E. G. Peek of Ocala has returned from a business and pleasure trip to Washington and others points in the East.

* * *

Dr. J. C. Collins of Orlando has been seriously ill for some weeks past.

* * *

Dr. J. B. Dowling of Alliance was married to Miss Mary Horn, Alliance, on June 20, 1930.

* * *

The obstetrical lectures given by Dr. McCord of Emory University to the members of the Manatee and Sarasota County Medical Societies during the month of July were well attended.

* * *

Dr. E. G. Lindner of Orlando is spending a month in Pennsylvania.

* * *

Drs. Frank Gray and C. D. Hoffman and families of Orlando are spending the month of August at Daytona Beach.

* * *

The Hernando General Hospital has been moved to 504 Howell Avenue, Brooksville.

* * *

The following Florida doctors attended the Southern Pediatric Seminar recently held at Saluda, North Carolina: P. W. Besenbruch, Davenport; Reddin Britt, St. Augustine; J. R. Chandler, Daytona Beach; Geo. A. Dame, Inverness; J. T. Denton, Sanford; B. D. Epling, Lake Wales; T. C. Kenaston, Cocoa; S. A. Lindsey, Ft. Meade; H. E. McMurray, Tampa; W. E. Sinclair, Orlando; Gordon Stanton, Hastings, and S. C. Wood, Leesburg.

* * *

Dr. E. T. Craney of Orlando is spending two months in the North, attending clinics in various cities.

* * *

Dr. Leland H. Dame of Inverness has been doing post-graduate work in New Orleans.

* * *

Dr. Lydia Woerner of Interlachen died July 3rd of apoplexy. Interment was at Interlachen July 5th.

* * *

Dr. John G. Lester of Lakeland is attending clinics in New York and Baltimore and expects to return by September 1st.

The following candidates passed the examination given by the State Board of Medical Examiners held at Lakeland June 16 and 17, 1930:

Aulls, E. C.	Orlando
Bird, Donald P.	Jacksonville
Boyd, C. W.	Jacksonville
Chappell, Frank Vann	Jacksonville
Edmundson, Frank B.	Pittsburgh, Pa.
Fisher, Luther C., Jr.	Pensacola
Fletcher, Elmer G.	St. Augustine
Frenay, John D.	Waterbury, Conn.
Fuller, Henry	Clearwater
Grable, James S.	Tampa
Gowe, Donald F.	Miami
Harris, Esam A.	Bessemer, Ala.
Hayes, John W.	Gainesville
Hebard, Chas. E.	Grand Rapids, Mich.
Hicks, Leonard J.	Orlando
Howell, Harry S.	Bradenton
Johnson, Samuel H.	Miami
McDowell, Walter	Jacksonville
McEwan, Duncan T.	Orlando
Owens, A. Neal	Heflin, Ala.
Palmer, Thos. M.	Tallahassee
Paterson, Russell S.	Mobile, Ala.
Phillips, N.	Jacksonville
Saslaw, Lewis B.	Tampa
Scuderi, Samuel A.	Tampa
Staps, Alfred E.	Chicago, Ill.
Staten, Torrence R.	Orlando
Sugg, W. D.	Sarasota
Vaughn, John W.	Jacksonville
Watson, Francis M.	Quincy
White, W. J.	Miami
Wood, George H.	Jasper, Mo.

The next examination by the State Board of Medical Examiners will be held November 10 and 11, 1930, at Jacksonville.

* * *

Dr. W. H. Watters of Boston and Miami has recently been re-elected president of the Massachusetts Medico-Legal Society. This society, which is the oldest of its kind in the country, is composed of official medical examiners of the state and those doctors and lawyers who are interested in medico-legal topics.

* * *

Dr. A. P. Harrison, until recently stationed at Tallahassee as district medical officer, is no longer with the State Board of Health. Dr. H. A. McClure of Chipley has been engaged to take his place and will begin work in the district about the middle of August.

* * *

Dr. K. C. Thomas of Miami is spending the month of August visiting clinics in the North, after which he expects to join his family, who are summering in Erie, Pennsylvania.

* * *

Dr. and Mrs. R. N. Burch of Miami announce the birth of a boy, July 19th.

A called meeting of the Escambia County Medical Society for the discussion of group malpractice insurance was held July 15th.

* * *

Dr. Norman M. Heggie of Jacksonville recently returned from an extended stay in Baltimore.

* * *

Dr. and Mrs. A. C. Walkup of St. Augustine recently returned from a vacation in the North. Dr. Walkup attended the meeting of the American Medical Association held in Detroit.

* * *

Dr. Tom M. Palmer, son of Dr. Henry E. Palmer of Tallahassee, has recently located in Jacksonville and is specializing in pediatrics. Prior to coming to Jacksonville, Dr. Palmer was connected with the Pediatric Hospital at Baltimore.

* * *

Drs. W. S. Hancock of New Port Richey and L. T. Furlow of Brooksville recently attended a meeting of the Emory Alumni held in Atlanta.

* * *

Dr. and Mrs. Walter D. Webb and daughter of St. Augustine recently left by motor for a trip through the North and expect to be gone the remainder of the summer.

* * *

Dr. Ernest B. Milam of Jacksonville, president of the Jacksonville Kiwanis Club, has recently returned from Atlantic City, where he attended the national Kiwanis convention.

* * *

There will be a meeting sponsored by the Garvan Cancer Research Laboratory, held in the ballroom of the Belvedere Hotel, Baltimore, Maryland, beginning Monday morning, September 15th, and ending Wednesday evening at 9 o'clock. During these days there will be lantern slide demonstrations, with four lantern slides and screens, on the Diagnosis and Treatment of Diseases and Tumors of Bone.

* * *

Dr. Leslie Max Jenkins and Miss Martha Lynch McDowell of Miami were married June 21, 1930.

* * *

Dr. and Mrs. Emil Lustig of St. Petersburg left recently for a two months' visit with their daughter in Philadelphia.

The National Tuberculosis Association and the committee on the costs of medical care are engaged in a survey of the extent and character of preventive medical services in industry throughout the United States, with particular reference to physical examinations.

They are at present endeavoring to obtain as many lists as possible of plants that are thought to have physical examinations or preventive medical services for their employees. To these companies, they are sending questionnaires to determine the nature of their medical service.

They ask your cooperation in this survey. They will be grateful for:

1. The names of any plants where workers are given physical examinations for employment or periodically thereafter.
2. The names of physicians or medical organizations which contract with industrial establishments to provide physical examinations for employees.
3. Your prompt attention and cooperation in answering any questionnaires you may receive from them.

Please send any information to: Elisabeth Dublin, Research Fellow, National Tuberculosis Association, 370 Seventh Avenue, New York City.

* * *

At the recent annual meeting of the National Board of Medical Examiners the following officers were elected: Waller S. Leathers, M.D., president; Everett S. Elwood, executive secretary; J. S. Rodman, M.D., medical secretary.

In addition to the officers, eight new members were elected for terms of six years each. Three of these are representatives of the Federation of State Boards of Medical Examiners in the United States. They are as follows: T. J. Crowe, M.D., secretary, Board of Medical Examiners for the State of Texas; J. Gurney Taylor, M.D., member of the Wisconsin State Board of Medical Examiners, and J. H. J. Upham, M.D., dean of the Ohio State University College of Medicine and member of the Ohio State Medical Board.

The remaining five members were elected at large. They are as follows: Charles A. Elliott, M.D., professor of medicine, Northwestern University Medical School; William DeB. MacNider, M.D., professor of Pharmacology, University of North Carolina School of Medicine; Walter W.

Palmer, M.D., professor of medicine, Columbia University College of Physicians and Surgeons; E. D. Plass, M.D., professor of obstetrics and gynecology, The State University of Iowa College of Medicine, and Charles R. Stockard, M.D., professor of anatomy, Cornell University Medical College.

In addition to the new members, Dr. Howard T. Karsner, professor of pathology, Western Reserve University, was elected for a second term of six years to succeed himself.

The constitution of the National Board of Medical Examiners was so amended at the annual meeting that its membership was increased from twenty-one to twenty-seven. The amendment provides that a total of fifteen memberships shall be representative and twelve elected at large. Six of the fifteen memberships are made up of the three surgeon-generals of the United States Army, Navy, and Public Health Service, and of an additional number from the medical corps of each of these services. Five memberships are made up of representatives from the state boards of medical examiners. Prior to this the state boards have had only three members to represent them. Two of the representative memberships are from the Council on Medical Education and Hospitals of the American Medical Association, and two from the Association of American Medical Colleges. Except the memberships from the Federal services, the term of office is six years, and no member can have more than two consecutive terms.

The reports of the officers of the board showed an increase of approximately ten per cent in the number of candidates taking the examinations during the past year as compared with the year previous.

The number of state boards now recognizing the national board's certificate total forty besides the territories of Hawaii and Porto Rico and the Canal Zone. Partial recognition is also granted the national board's examinations by England, Scotland, Ireland and Spain.

Examinations in Part I and II were scheduled and given in forty-one centers throughout the country; there being a total of 707 candidates registered for Part I and 337 for Part II. Examinations in Part III, the clinical and practical examination, were held in sixteen centers in June and July, with approximately 280 registered candidates.

THE WOMAN'S AUXILIARY PAGE

WOMAN'S AUXILIARY
TO THE
FLORIDA MEDICAL ASSOCIATION, INC.

State Editor
MRS. EDWARD JELKS,
2244 St. Johns Avenue
Jacksonville

OFFICERS

Mrs. J. RALSTON WELLS, President	<i>Daytona Beach</i>
Mrs. S. E. DRISKELL, President-elect	<i>Jacksonville</i>
Mrs. W. G. POST, JR., Vice-President	<i>St. Petersburg</i>
Mrs. J. M. IRWIN, Historian	<i>St. Augustine</i>
Mrs. J. E. TAYLOR, Secy.-Treas.	<i>DeLand</i>

REPORT OF THE EIGHTH ANNUAL SESSION WOMAN'S AUXILIARY TO THE AMERICAN MEDICAL ASSOCIATION, DETROIT, MICH. JUNE 23-27.

MRS. J. RALSTON WELLS.

It is a difficult matter to make an accurate report of a convention the principal result of which was an intensifying of interest and a renewal of inspiration. From the moment one set foot in Detroit until the last farewell was said, information, incident, and inspiration poured in so fast that even yet they have not been assimilated. The things that we may be able to accomplish together this year will be the best report that I can make.

The actual work of the convention started with the meeting of the Executive Board on the afternoon of June 23rd. This meeting was very ably conducted by the President, Mrs. George H. Hoxie, Missouri. Routine business was quickly dispatched and a general discussion followed of the accomplishments and shortcomings of the component State Auxiliaries. The general failure to answer letters promptly, or otherwise, and neglect in keeping accurate records were stressed. But the activities which had been sponsored and the results which had been accomplished by many states far outshone these. At the close of this meeting, the Auxiliary to the Wayne County Medical Society were hostesses at a tea, which was one of the most charming social affairs of the convention.

The general business meeting on Tuesday morning, June 24, was full of interesting reports. The splendid financial condition in which the

retiring administration had left the organization was particularly noteworthy. With all bills paid, there was a balance in the treasury of over \$1,500. With this on hand, and with an estimated income of over \$2,000, the Budget Committee was able to make a businesslike report for the guidance of the incoming administration.

After the adjournment of the general meeting, a delightful luncheon was served at the Hotel Tuller with many distinguished guests present. Greetings were spoken by Dr. Malcolm L. Harris, president, A. M. A.; Dr. William Gerry Morgan, president-elect; and Dr. J. H. J. Upham, chairman Advisory Council, A. M. A. Dr. Charles H. Mayo made the interesting address of the day.

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The post convention board meeting was held on the morning of June 26, with the new president, Mrs. J. Newton Hunsberger, Pennsylvania, in the chair. Suggestions for committee appointments and plans for the coming year were the order of business. Florida was honored in having the efficient work of Mrs. Herrman H. Harris, Jacksonville, recognized by her appointment as a member of the National Hygeia Committee.

In a quick summary of the aims of the organization which seem outstanding results of this meeting, aside from the paramount one of social contact and friendship, I must lay particular stress upon self-education and education of the public. It is along these lines that I hope we may work this year in Florida, for the actual fruits of this inspirational meeting will be submitted to you later in the form of an active program.

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I could not close this account of the Detroit convention without a tribute to the Woman's Auxiliary to the Wayne County Medical Society for their efficient and charming handling of both business and social affairs of the meeting. Charming welcome, delightful entertainment, and thoughtful consideration marked every phase of the activities for which they were responsible.

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Vice-Presidents—

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Mrs. Wells announces the appointment of Mrs. Leigh F. Robinson of Fort Lauderdale as Chairman of the Program Committee.

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TUBERCULOSIS ABSTRACTS

A REVIEW FOR PHYSICIANS

ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

A VIEW quite generally held by the public and all too often encouraged by physicians is that tuberculosis does not occur in old age. Osler called attention to the surprising prevalence of the disease in the aged, particularly in institutions. He noted that it is usually latent and runs a slow course, and that the diagnosis may easily be overlooked because of the emphysema and co-existing bronchitis which mask the symptoms of the underlying tuberculosis. In a recent article, Myers and Anderson epitomized the literature on tuberculosis among older persons and reported 37 cases of frank pulmonary tuberculosis in men and women from 50 to 80 years of age. Abstracts from this article follow.

TUBERCULOSIS AMONG THE AGED

Tuberculosis in people between the age of 50 and 90 years may be of all types that are ordinarily seen in the earlier years of life, but the chronic indurative and ulcerative types seem to predominate. Taubert found tuberculous caries, meningitis, and miliary disease, and Schurmann reported a recent primary complex, in addition to an old primary complex, in the lung of a man 72 years old. Fried reports a case 59 years of age with tuberculosis of the lung hilum, which resulted in death.

SYMPTOMS AND PHYSICAL SIGNS

Although anatomically the tuberculous process in the aged may be very extensive, it is clinically mild, and symptoms are frequently entirely absent. Night sweats, fever, and hemoptysis are rare. The patient may experience some dyspnea on exertion. Usually, there is cough of long standing, but expectoration is likely to be absent. In most cases, the symptoms are those commonly attributed to emphysema, chronic bronchitis, or cardiac changes.

Physical signs also may be slight or absent; even rales are rarely elicited. Auscultation is difficult because the signs of emphysema overshadow those of tuberculosis. The X-ray is a valuable aid; in fact, it is often the only means of

(Continued on page 92)

X-Ray and Clinical
Laboratories

OF DRS. LAKE AND AYERS

A. J. Ayers, M.D., Director Laboratory of Clinical Pathology

Wm. F. Lake, M.D., Director Laboratory of X-Ray

Tissue examination, gross and microscopic, Blood Chemistry, Serology, Bacteriology and Metabolism.

We are equipped to do all X-Ray and Laboratory diagnoses and X-Ray therapy. Containers and information furnished upon request. Reports telegraphed when desired.

111 Medical Arts Building
Atlanta, Georgia

Approved by the Council on Medical Education and Hospitals of the American Medical Association.

SUCCEEDING WALLACE-SOMERVILLE
SANITARIUM, MEMPHIS, TENN.

THE WALLACE
SANITARIUM

MEMPHIS, TENN.

WALTER R. WALLACE, M.D.
HUGH W. FRIDDY, M.D.



FOR THE TREATMENT OF
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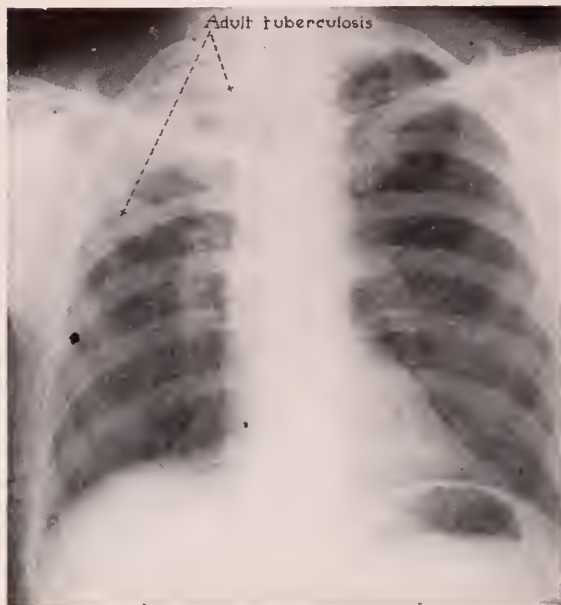
ALCOHOLISM, MENTAL AND
NERVOUS DISEASES

LOCATED IN THE EASTERN SUBURBS OF THE CITY. SIXTEEN ACRES OF BEAUTIFUL GROUNDS. ALL EQUIPMENT FOR CARE OF PATIENTS ADMITTED.

COUNTY SOCIETY	SECRETARY	MEETINGS				Dues Paid.
		Date	Time	Place	Luncheon?	
Alachua	J. E. Maines, Jr., M.D., Gainesville.	2nd Tuesday	12:00 Noon	White House	Yes.	88%
Bay	Don S. Fraser, M.D., Panama City.					50%
Brevard	I. K. Hicks, M.D., Melbourne.	3rd Tuesday		Varies		91%
Broward	Ralph Lingeman, M.D., Ft. Lauderdale.	2nd Tuesday	8:00 P.M.	Chamber of Com- merce	No.	86%
Columbia.....	T. H. Bates, M.D., Lake City.	1st Monday.	7:30 P.M.	Blanche Hotel		73%
Dade	E. N. McKenzie, M.D., Miami.	1st Friday	8:30 P.M.	Club Room, Huntington Bldg.	Occasionally.	82%
DeSoto-Hardee- Highlands ...	H. V. Weems, M.D., Sebring.		8:00 P.M.	Varies	Yes.	93%
Duval	Kenneth A. Morris, M.D., Jacksonville.	1st Tuesday	8:15 P.M.	Chamber of Com- merce Building	No.	78%
Escambia	J. M. Hoffman, M.D., Pensacola.	1st Tuesday	8:00 P.M.	Board of Health Building	No.	89%
Hamilton	J. R. Bruce, M.D., Jasper.					100%
Hillsboro	J. T. Cowart, M.D., Tampa.	1st and 3rd Tues- days	8:00 P.M.	Tampa Municipal Hospital	No.	84%
Jackson	C. H. Harrison, M.D., Cottondale.	2nd Tuesday	3:00 P.M.	Marianna	No.	69%
Lake	W. L. Ashton, M.D., Umatilla.	1st Thursday	12:30 P.M.	Eustis	Yes	100%
Lee	H. Quillian Jones, M.D., Ft. Myers.	3rd Friday	7:30 P.M.	Lee Memorial Hospital	No.	83%
Leon-Gadsden- Liberty- Wakulla- Jefferson	J. B. Brinson, Jr., M.D., Monticello.	Quarterly	3:00 P.M.	Varies	Yes.	86%
Madison	Geo. O. Davis, M.D., Madison.					29%
Manatee	A. Q. English, M.D., Manatee.	1st and 3rd Tues. Oct. to May; 2nd Tues. May to Oct.	7:00 P.M.	Dixie Grande Hotel	Yes.	92%
Marion	Thos. H. Wallis, M.D., Ocala.	3rd Thursday	12:30 P.M.	Harrington Hotel	Yes.	86%
Monroe	W. R. Warren, M.D., Key West.	1st Sunday	9:00 P.M.	Varies	Yes.	
Orange	J. R. Chappell, M.D., Orlando.	3rd Wednesday	8:30 P.M.	Varies	No.	81%
Palm Beach ...	R. G. Lewis, M.D., W. Palm Beach.	2nd Monday	8:00 P.M.	Court House	Yes.	76%
Pasco- Hernando- Citrus.....	Geo. R. Creekmore, M. D., Brooksville.	2nd Thursday	7:00 P.M.	Varies	Yes.	87%
Pinellas	O. O. Feaster, M.D., St. Petersburg.	Every other Friday	8:00 P.M.	500 Power & Light Bldg.	No.	81%
Polk	Herman Watson, M.D., Lakeland.	2nd Wednesday in Feb., Apr., June, Aug., Oct., Dec.	1:00 P.M.	Lakeland	Yes.	95%
Putnam	E. W. Warren, M.D., Palatka.	2nd Thursday	7:00 P.M.	James Hotel, Palatka	Yes.	64%
St. Johns	A. C. Walkup, M.D., St. Augustine.	3rd Tuesday	8:30 P.M.	Varies	Yes.	86%
St. Lucie-Okeech- bee-Indian River-Martin ..	C. L. Davis, M.D., Okeechobee.	3rd Thursday	8:00 P.M.	Varies	Yes.	100%
Sarasota	F. C. Metzger, M.D., Sarasota.	2nd Tuesday	8:30 P.M.	Varies	Occasionally.	75%
Seminole	J. T. Denton, M.D., Sanford.	2nd Friday	8:00 P.M.	City Hospital		100%
Sumter	W. E. Michell, M.D., Coleman.	2nd Tuesday		Varies	No.	100%
Suwannee	W. C. White, M.D., Live Oak.					67%
Taylor	R. J. Greene, M.D., Perry.	Last Thursday	12:15 P.M.	Eldorado Cafe	Yes.	60%
Volusia	J. Ralston Wells, M.D., Daytona Beach.	2nd Tuesday	7:30 P.M.	Varies	Yes.	87%
Walton- Okaloosa	A. G. Williams, M.D., Lakewood.	3rd Thursday	8:00 P.M.	Varies	Occasionally.	100%
Washington- Holmes	H. A. McClure, M.D., Chipley.					56%

NOTE—Secretaries: Please submit information to complete the above schedule.

making the diagnosis. The tuberculin test, as Krause says, is the only procedure which, unassisted, can settle a diagnosis of tuberculosis, though only in a negative way. It should be done, therefore, in every case, for, if negative, tuberculosis may be confidently excluded. Tubercle bacilli should be searched for. Goldman and Wolff examined routinely the sputum of institutional patients and found bacilli in 2% of 339 aged people, none of whom was suspected of having tuberculosis.



Age 70 years. Pulmonary tuberculosis diagnosed soon after attack of pneumonia 45 years ago. Roentgenograph taken July, 1928.

THE DANGERS

The aged patient himself has little to fear from the tuberculous condition, but the danger to his associates is great. Numerous cases of children having become infected and diseased through exposure to grandparents or other elderly members of the family are on record. The hazard is all the greater because usually tuberculosis is not suspected, and the usual precautions are not taken. A case is cited:

In a luxurious home in Paris, father and mother in the best of health and with excellent past histories, three boys, one after the other, almost at the same age, died of tuberculous meningitis. Investigation led to the governess, more than 60 years old and a sufferer from chronic bronchitis, emphysema and asthma, which proved to be a

(Continued on page 94)

J. K. ATTWOOD, Pharmacist

Wade Bldg., 1022 Park Street,
JACKSONVILLE, FLORIDA.

BIOLOGICALS TEST SOLUTIONS
STAINS (MICROSCOPIC)
PRESCRIPTIONS

Out-of-town Orders Shipped by Return Mail



MIAMI RETREAT

For Invalids, Mental, Nervous and
Addict Patients

MIAMI

FLORIDA

*Any one can make belts, but belts which
give compression without uplift
may do serious injury*

"STORM"

The New
"Type N"
STORM
Supporter



Pleases doctors
and patients. Long
laced back. Soft
extension, low on
hips. Hose sup-
porters attached.

Takes Place of Corsets

Adapted for ptosis, hernia, pregnancy, obesity,
relaxed sacro-iliac articulations, kidney condi-
tions, high and low operations.

Katherine L. Storm, M.D.

Originator, Owner, and Maker
1701 DIAMOND ST. PHILADELPHIA

Summer Diarrhea

The following formula is submitted as a means of preparing suitable nourishment in intestinal disturbances of infants usually referred to as summer diarrhea:

Mellin's Food . . . 4 level tablespoonfuls
Water (boiled, then cooled) . 16 fluidounces



This mixture contains proteins, carbohydrates and mineral salts in a form readily digestible and available for immediate assimilation.

The need for protein is well understood as is also the value of mineral salts, which play such an important part in all metabolic processes. Carbohydrates are a real necessity, for life cannot be long sustained on a carbohydrate-free diet. It should also be stated that the predominating carbohydrate in the above food mixture is maltose—which is particularly suitable in conditions where rapid assimilation is an outstanding factor.

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TREATMENT

A radical change in the habits and mode of life of the aged tuberculous person is probably not advisable. Teaching them to prevent the spread of their disease is the most important requirement. If the disease is unilateral, artificial pneumothorax may render the sputum negative and thus make them fairly safe associates.

SUMMARY

The authors, from their review of literature and studies of their own cases, make the following conclusions:

1. Thirty-seven cases of frank pulmonary tuberculosis in men and women ranging from fifty to eighty years are reported.

2. In 9 cases, there had been definite exposure to tuberculosis, usually to members of their families in early life.

3. Among the children and grandchildren of these 37 men and women, tuberculosis is known to exist in thirteen cases. It has been impossible to examine more than a few of the children and grandchildren.

4. The symptoms in the aged cases dated from six weeks to approximately forty-five years before we saw the patients. In 6 cases, hemorrhage was the first symptom, and in 5 others it has occurred during the course of the disease. Pleurisy was the first symptom in six cases. Cough, frequent colds, bronchitis, and catarrh were the first symptoms in 20 cases.

5. On physical examination, all signs were elicited from those of the most advanced disease to those of a normal chest.

6. Tubercle bacilli were demonstrated in 21 cases. We are cognizant of the fact that a negative finding on a few examinations in the remaining cases is of no significance.

(Continued on page 96)



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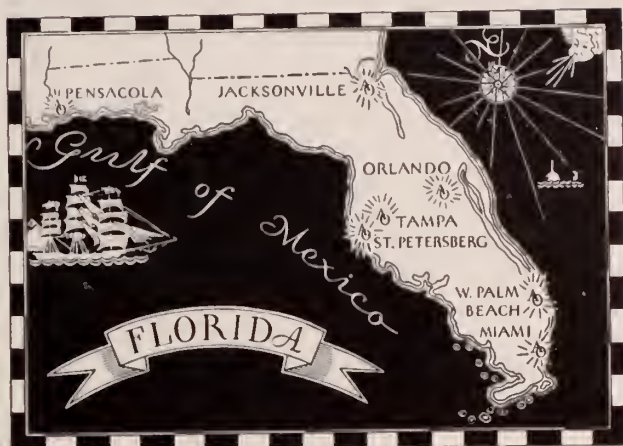
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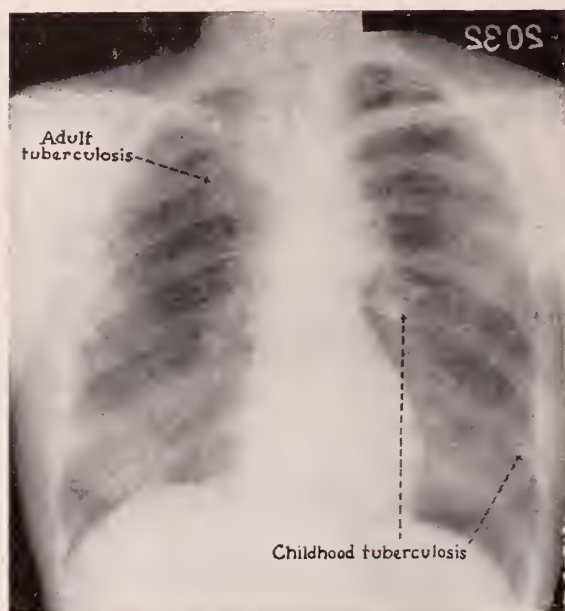
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7. The cutaneous tuberculin test is of great value in chest work among the aged. Some have not been infected, others have "burned out" their infections; therefore, a negative test is of great significance.

8. X-ray film examination should be made in every case. Without it, many frank cases of tuberculosis and other chest disease will remain undiagnosed.

9. In treatment, such a high degree of conservation is not necessary as is practiced among young adults. When the disease is unilateral and



Age 63 years. Both childhood and adult types of tuberculosis present.

progressive, artificial pneumothorax may be possible. Even extra-pleural thoracoplasty may be indicated in the earlier years of this age-period.

10. Tuberculosis in the aged is one of the great problems from the standpoint of epidemiology. Its danger lies in its mildness. Many cases are not diagnosed until very late in life, and not a few are first diagnosed at the postmortem table.—*Tuberculosis among the Aged, J. A. Myers and H. R. Anderson, Amer. Rev. of Tuberc., April, 1930.*

(This review secured by the Florida Public Health Association from the National Tuberculosis Association).



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Pinch pepper
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¼ cup cream, whipped .	55	1	22	1.5
Total	210	51	44	1.5	525
One serving	35	8.5	7.3	87.5

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¼ cup cold water
1½ cups boiling water
Grated rind of ½ lemon
3 tablespoons lemon juice or 1 tablespoon fruit acid	30	3
½ gr. saccharin .....	....	....	....	....	....
½ cup mashed banana ..	120	1.5	1	26	....
6 tablespoons cream, whipped	85	2	34	2	....
Total	11.5	35	31	485	
One serving	2	6	5	81	

Soak gelatine in cold water five minutes. Boil rind and water for two minutes, add gelatine and stir until dissolved. Add lemon flavoring and saccharin, strain and chill. When nearly set, fold in mashed banana and whipped cream, mold and chill until set.

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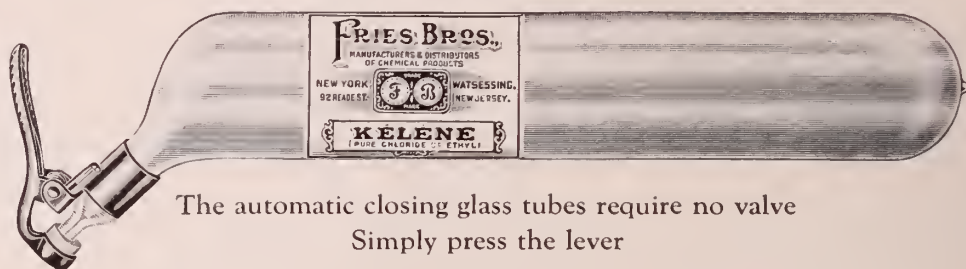
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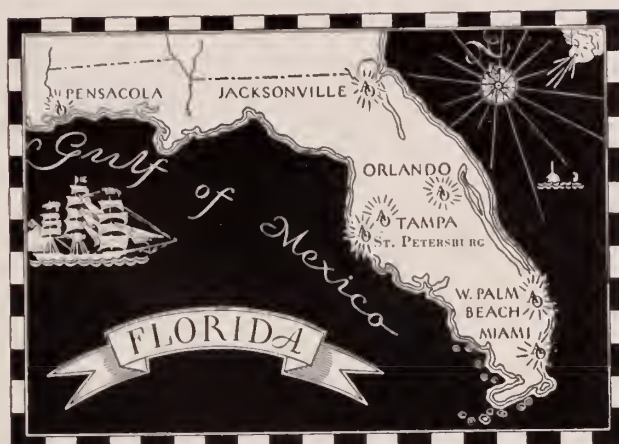
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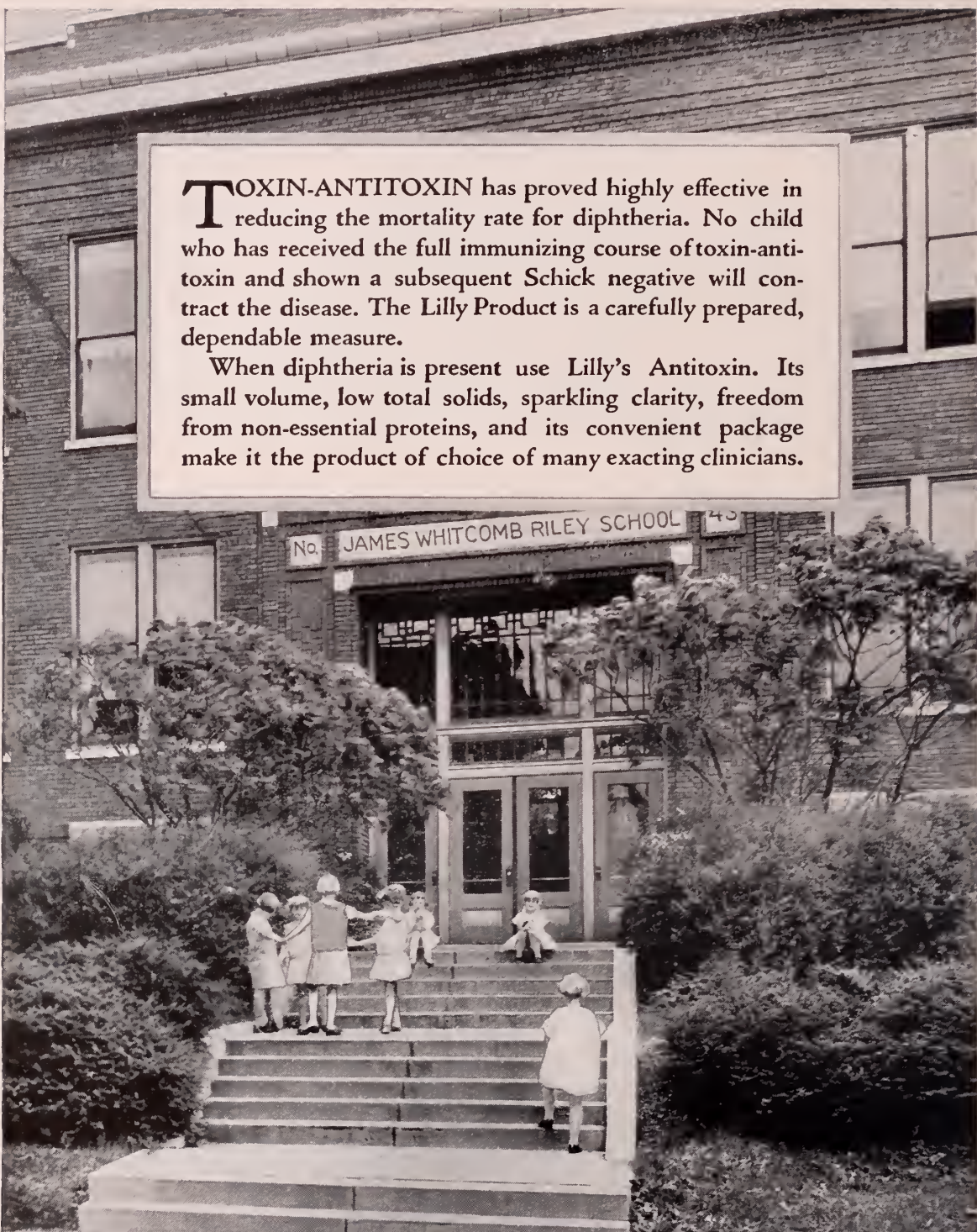


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PUBLISHED MONTHLY

Volume XVII

Jacksonville, Florida, September, 1930

Number 3

ACUTE PANCREATITIS FROM A DIAGNOSTIC STANDPOINT.*

WILLIAM W. MASSEY, M.D.,
Quincy.

Few diseases are as puzzling and so often as rapidly fatal as is acute pancreatitis. Few diseases require as prompt surgical consideration as does acute pancreatitis. The importance then of reviewing the essentials of this affection, and of differentiating it from the several others which it so closely simulates, is self-evident.

For generations, it has been a conceded fact that the pancreas is subject to the same inflammatory processes as any other organ, yet not more than 35 years have elapsed since a rational appreciation of the true condition that exists was first announced and energetically defended by the late Reginald H. Fitz, Professor of the Theory and Practice of Medicine in Harvard University.

In 1889, Fitz classified the parenchymatous forms of acute pancreatitis as hemorrhagic, suppurative and gangrenous; a classification more arbitrary than actual, for in the present state of our knowledge, such finely drawn-out distinctions are incapable of the clinical diagnostic powers.

A characteristic inherent in pancreatic disease is the marked tendency to hemorrhage. This prevailing symptom has been the cause of much discussion and misunderstanding. Most textbooks dwell especially upon hemorrhagic pancreatitis, as though the condition were mostly a pancreatic entity, whereas a hemorrhagic form of inflammation may attack many different structures and organs throughout the body. The one fact to be emphasized is that hemorrhage is characteristic of pancreatic disease. This hemorrhage may be manifest as a sanguinolent effusion permeating the entire abdomen, or in the form of numerous discrete hematmata not at the exact site of the pancreas, or the pancreas itself may appear as the site of a great hematoma or, perhaps, only a petechial hemorrhage may be evidenced.

While there is a class of observers who main-

tain that hemorrhage may occur altogether apart from inflammation and produce death through the occurrence of so-called pancreatic apoplexy, without any trace of inflammatory symptoms, there are not a few clinicians who assert that hemorrhage occurs first and is succeeded by inflammation; this inflammation being readily engendered by the intimate relationship of the pancreatic duct and the intestine, the latter favoring the inflammatory process through infection of the intestinal mucous membrane. So able an authority as Mayo Robson believes both these theories feasible and he considers the rapidly fatal form of acute pancreatitis, associated with collapse, to be the result of hemorrhage preceding the inflammation; whereas, in those cases not so acute in nature, where the symptoms are not ushered in with collapse, and where resolution and relapse are liable to occur, he believes the inflammation has preceded the hemorrhage.

FACTORS IN PANCREATIC INFECTION

The studies of Opie and Flexner (Bulletin Johns Hopkins Hospital), have proved that in many cases of acute pancreatitis the process is an infective one. In a series of experiments, Flexner showed that the injection of irritant substance into the pancreatic duct resulted in hemorrhage and fat necrosis. Opie, in discovering that in one case a small gall-stone impacted in the ampulla (the orifice of which it blocked, but the lumen of which it did not fully occupy), undertook a series of experiments which proved that injection of bile into the pancreatic duct invariably produced acute pancreatitis. A thorough study of recorded cases proves the deductions of Opie, of the connection between gall-stone obstruction on the common duct termination and acute pancreatitis, to be substantially correct.

The etiological factors bearing upon this subject are most important, and, comparatively, only slightly understood.

Acute pancreatitis is a disease of middle and later life. Vascular disease, such as syphilis and alcohol, are causative factors. In younger per-

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sons, the victims of alcoholic abuse, the disease has repeatedly been found. Acute pancreatitis occurs most often in males above the age of fifty years.

But, as was previously mentioned, infection plays a dominant role in the etiology. Among these are mentioned typhoid fever, the first of such cases being reported by Moynihan, of Leeds, England. In 1908, Musser, of Philadelphia, observed acute pancreatitis as a complication of typhoid fever. Among other infections, predisposing to the development of pancreatitis, we include parotitis and influenza. It is significant, although a peculiar fact, that cases of acute pancreatitis are by no means uncommon in the pregnant woman at about the third month. Gastrointestinal catarrh, especially when recurrent, is usually set down as a favoring cause. Cholelithiasis is also at times a contributing factor. J. B. Deaver wisely asserts that the milder cases of the affection will no doubt be recognized as a result of experience and, when one will be able to study and treat these cases, he will understand more about acute pancreatitis than he does at the present time, when the fulminating type is the most familiar one to the surgeon. He emphasizes the fact that the acute symptoms arise so suddenly and are of such an overwhelming nature, that the patient can give no detailed history of his previous condition and that such prodromal symptoms are only discovered by inquiries from the patient after the operation or from his friends after his death. The disease runs its course in from five days to a week. Death occurs within a week in the vast majority of cases without operation.

SYMPTOMATOLOGY

The following prodromal symptoms are asserted by some authorities to be present in 70 to 75 per cent of the cases: digestive symptoms, stomachic disturbances and gall-stone colic. The existence of these prodromes is denied by others.

The patient most often seized by the condition is apparently in the best of health, robust, with the history of no previous disease, and obese. Moynihan emphasizes the fact that the symptomatology of acute pancreatitis is not at all characteristic, so that he has seen it mistaken for perforation of the stomach, or of the duodenum, or of appendicitis.

The symptomatology is peculiar. The pain may be mistaken for the colicky pain of intestinal

obstruction. But the pain of pancreatitis is often more excruciating from the outset and is usually well localized in the epigastrium, more to the left than to the right side of the median line. Or the pain may be experienced in the dorsal region to the left of the spine or at the left shoulder blade. J. B. Deaver believes it "not unlikely in these cases attended by extremely severe pain, which cannot be relieved by morphine and which impels the patient to rise from the bed and walk around the room and frequently change his position, and which are not attended by marked collapse, that the hemorrhagic exudate is still confined by the capsule of the pancreas, not having broken through into the general peritoneal cavity, and that it is the latter event which brings on collapse." "We have observed," he says, "a few such cases where this state of affairs was demonstrated at very early operation. In such patients the pulse may remain full and strong and of normal rate. This may serve to differentiate the condition from intestinal obstruction in which the pulse rate usually rises rapidly even before the onset of peritonitis and fever."

Vomiting is an early and important symptom, and in some cases is persistent and almost uncontrollable. When incessant and rebellious at all treatment, acute intestinal obstruction, high up, is to be strongly suspected. In intestinal obstruction, however, the vomiting is projectile, there is neither nausea, nor retching, the vomitus soon becoming bile stained and finally fecal. In pancreatitis, the vomitus consists first of the stomach contents, then of bile-stained fluids and finally of altered blood, i. e., "black vomit." Moynihan speaks of the curious leaden color of the face and lips and Halsted called attention to cyanosis of the face and abdominal wall.

"As a rule," says Moynihan, "the diagnosis can be made from the history of a sudden onset, and from the rapid development of signs of peritonitis in the upper part of the abdomen." He then quotes the now classical dictum as given by Fitz in his original paper: "Acute pancreatitis is to be suspected when a previously healthy person or a sufferer from occasional attacks of indigestion is suddenly seized with violent pain in the epigastrium, followed by vomiting and collapse, and in the course of 24 hours by a circumscribed epigastric swelling, tympanitic or resistant, with slight rise of temperature."

The ordinary course of temperature in this class of cases is to approach subnormal; at best

the temperature is rarely high. The pulse rate is also slower than in health, especially when the toxic effusion is confined within the capsule: extreme rapidity of the pulse is an accompaniment of collapse. The dyspnea is apparently largely due to excruciating pain and to embarrassment of the diaphragmatic excursions, because of the encroachment of the engorged pancreas.

Convulsions, coma and death are, at times, the closing events of the affection; and Tomaschny noted in the case of an old woman with senile dementia, who never had epilepsy or diabetes, and with normal kidneys, the existence of the disease and concluded that the convulsions were either reflex in nature from pressure on the solar plexus, or else toxemic in origin. On the under surface of the dura mater were small yellow spots, also present in the peripancreatic fat and interpreted as areas of fat necrosis.

Jaundice is a very inconstant manifestation. It may or may not be present and is usually silent. The method of its production depends either upon the obstruction caused by stone, or to compression of the bile-duct by the affected pancreas.

DIFFERENTIATION

With these deductions in mind, we need consider a matter of much confusion, namely, the differentiation of acute pancreatitis from other abdominal affections, any one of which it may at times closely simulate.

The lesions of the right upper quadrant of the abdomen may so simulate one another as to test the skill and the diagnostic acumen of the very best surgeon. For in this, one of the most important areas in the body, great confusion may arise in a diagnosis to determine if this be a case of acute pancreatitis, acute appendicitis, gastric perforation, pyloric or duodenal perforation, intestinal obstruction, biliary colic, etc.

Acute appendicitis may resemble instances of pancreatitis, but in acute pancreatitis the onset of pain is excruciating and, as the acute symptoms subside, a mass will be found in the epigastric region, to the left of the median line or in the left loin. The patient sits down and refuses to move or be moved. The temperature is subnormal and the general condition is alarming, the patient being dyspneic, cyanotic, and collapsed. Hiccup is frequently present, feces contain fat and the urine is albuminous. The disease is not very common in the young or in the adolescent. On the other hand, appendicitis affects most commonly

those between the ages of fifteen and thirty-five. According to the late John B. Murphy: "Appendicitis is rare in infancy, very common in young adults, only fairly common in middle life and unusual in the aged." Again the pain in appendicitis is not so violently explosive in character, it is apt to be located at the umbilicus and be of a colicky nature, and there is often a history of a previous attack or attacks.

In biliary colic, the great intensity of the symptomatology of acute pancreatitis is wanting. The suffering in gall-stone will yield to the administration of morphine. In biliary colic there is usually a history of repeated attacks, but the subnormal temperature, the cyanosis and sense of impending death are not the usual parts of the symptom-complex of biliary colic. However, it must always be remembered that involvement of the pancreas in gall-stone disease is exceedingly common, and, as pointed out by the Mayos, in nearly 50 per cent of the cases acute infections of the pancreas have their origin in infection of the biliary tract, and that 75 per cent of chronic involvements of the pancreas have the same etiology. So true is this, that stones in the common duct, in the very large majority of cases, are associated with chronic thickening of the head of the pancreas.

Rarely may intestinal obstruction be confused with acute pancreatitis. Its lengthy differentiation has a more honored place in the medical textbook than in actual practice. The collapse, the temperature and the pulse are very dissimilar. The vomiting of obstruction is projectile, with or even without slight nausea, the vomiting rapidly becoming fecal. In obstruction, the intestinal symptoms are the more conspicuous; in acute pancreatitis, the peritoneal manifestations are more prominently evidenced.

Perforations of the stomach or of the duodenum are practically unknown to attack the individual without any previous complaint regarding these organs on the part of the individual. Perforation of the gall-bladder without any previous distress in this region, or at least some palpable distension, makes the differentiation quite apparent at once.

Gynecological conditions are to be excluded by a previous history of the affections; an ovarian cyst twisted on its pedicle is thus to be eliminated. The same applies to the occurrence of an extra-uterine gestation, etc.

And yet, with the distinctions just enumerated

clearly in mind, it is a fact, incontroverted, and incontrovertible, that even in the best of hands it is the exception, and a very rare one at that, to form a correct diagnosis of the condition before performing a laparotomy.

It is the experience of skilled surgeons with large clinics to be frequently told by the patient that these attacks have extended over periods of years. Through these statements the surgeon is often unwittingly misled. What the patient suffered was undoubtedly some affection of another viscus, of which the gall-bladder is the one most usually involved.

DISCUSSION

Dr. E. B. Milam, Jacksonville:

Dr. Massey has opened the discussion of a condition that is relatively rare, I think, with the average internist and surgeon, but nevertheless it is particularly interesting because the diagnosis is very difficult. There is probably no other condition in medicine that tests the ingenuity of the observer as much as does acute pancreatitis. Here one usually seeks for the ordinary leads which are not to be found, and one stumbles into the symptoms of perforated peptic ulcer, acute appendicitis, acute gall-bladder disease or other familiar surgical conditions in the abdomen. What one does see in acute pancreatitis is a patient suddenly and completely overwhelmed as if by a combination of all the acute abdominal conditions. The very profundity of the picture leads one to a suspicion of the true condition. There is a sudden attack of tremendous pain not relieved by morphia. Other conditions with which we are familiar are relieved if given enough morphine, that is, eventually relieved, while this one seems to show no results at all with the use of opiates.

The biliary channels seem largely inseparable from pancreatitis. In some eastern clinic, I believe, it was observed that 70% of these pancreatitis cases showed either a past history or some present involvement of the gall channels, the gall-bladder in particular.

We had an interesting condition in Jacksonville in a recent epidemic of mumps. A mild pancreatitis, a very few of which cases reached the surgical stage, was observed. They had some of the clinical symptoms Dr. Massey has described to us. The more severe ones had vomiting that seemed to be out of control entirely; some pain and some distention with diarrhea for three or four days, with apparently spontaneous recovery.

I think Dr. Massey is dealing with the more

acute cases that call for immediate action. In these cases a comprehensive study that takes three or four days cannot be done as a decision has to be made quickly. Certainly, the condition is frequently confused with the more usual surgical conditions of the abdomen; consequently, I think, if ever a laparotomy was justified it is in one of these cases. I think there the surgeon has the complete cooperation of the internist in quickly opening the abdomen and seeking relief. If a mistake is made between the pancreas and gall-bladder, the condition is surgical in either case, and I think the procedure is wholly justified.

Dr. J. C. Davis, Quincy:

The doctor, in his most excellent paper, has given us the classification, etiology, symptomatology and differential diagnosis of the master surgeons. Their ideas, as varied as their personalities, give us much valuable information to ponder over.

This condition is so rare that every general practitioner does not have an opportunity to observe a case during his entire career. Consequently, he should not be expected to make a perfect diagnosis when the majority of cases reported by our greatest surgeons were diagnosed after an exploratory operation. But, the doctor should know that any, or all, of the conditions that he is liable to confuse with acute pancreatitis are strictly surgical cases and none of them respond to medical treatment. However, if he is so fortunate as to make a preoperative diagnosis, he is enabled to plan his method of approach to more advantage.

It is possible and often happens that we have associated pathology of other viscera at the same time that demands surgical intervention. A case occurred recently where three physicians made different diagnoses and at operation all of them were found to be correct. A young white woman, age 17 years, had pain in abdomen for one week, ushered in with nausea, vomiting, dry hot skin, rapid pulse, anxious facial expression, severe shock, sub-normal temperature to the sixth day when it rose to 101. The tentative diagnoses of the physicians were as follows: first physician, acute indigestion with obstruction of the duodenum; second physician, acute pancreatitis or intestinal obstruction; third physician, acute appendicitis or gall-bladder.

Exploratory operation revealed acutely distended appendix, adhesions about the gall-bladder

and duodenum causing obstruction of the common and pancreatic duct, edematous and ischemic duodenum producing a reflex pylorospasm. After removing the appendix and breaking loose the adhesions, the pancreas was explored through the transverse mesocolon. The head of the pancreas was much enlarged containing hemorrhagic infarcts, necrotic areas that were suppurating and of a gangrenous appearance. The pathology found in this pancreas is such as is to be expected in blocking the pancreatic duct, whether by calculi, inspissated bile, adhesions, bacteremia, etc. Instead of classifying the different types of pancreatitis these are merely stages in the progress of an organ of such vascular and glandular structure. (You would not classify acute lobar pneumonia as engorgement, red hepatization or gray hepatization as those are stages of the disease.) After the obstruction blocking the pancreatic duct was freed and blunt punctures made in the most dependant nodules and drainage tube inserted, the patient made an uninterrupted recovery. This case is mentioned in order to substantiate the fact that after relieving the tension, evacuating septic material and fluid and establishing free drainage, this organ has wonderful recuperative powers.

The prognosis should be extremely guarded and depends upon a number of factors: 1st. The resistance and build of the patient. 2nd. The time elapsing between the onset of symptoms and the diagnosis and treatment instituted. 3rd. The severity of infection and hemorrhage. 4th. Complications present.

Dr. J. M. Bryant, Jacksonville:

I think the surgical treatment of pancreatitis depends upon the stage of the disease. I do not believe it is necessary to incise the pancreas in every case of pancreatitis. Of course, the acute hemorrhagic pancreas is supposed to be the type under discussion. If the pancreas is tense, multiple small incisions can be made in the capsule with slow dilatation and increase of opening with instruments and drainage tubes or gauze inserted. This is probably the type of case in which incision of the pancreas is indicated. If the case is more chronic and the pancreas is not under tension, the capsule probably does not need incision. These cases seem to get along better if drainage is obtained through the gall-bladder or common bile duct. Of course, if there is occlusion of the pancreatic duct, the pancreas has to be incised and drained regardless of the stage of the disease.

Dr. J. Ralston Wells, Daytona Beach:

I just want to cite one case of acute pancreatitis that made a particular impression. I agree with Dr. Massey, and I think his paper is very well written and presented. The most difficult diagnosis in the abdomen to make, is that of acute pancreatitis, and at first, pre-operative. In the majority of cases, when the right pre-operative diagnosis is made at first, it generally is an accident.

A young man, age 26, came into my service in the Halifax District Hospital, with symptoms of acute obstruction or intestinal ileus. We operated as an exploratory for obstruction of the bowel, and found the ileus was due to a mesenteric thrombosis. Further exploration showed the pancreas to be distinctly pathological—a hard, enlarged, indurated pancreas. Just above this, in the meso, was the hard thrombosis, of about 2 cm. in length. Of course, a mesenteric thrombosis is generally fatal. Acute obstruction may, or may not, be present, but in my experience, it is a very serious condition. I had some time previously decided that the next thrombosis I saw, I would milk the clot into a main channel if possible, and take my chances. So, accordingly, I milked back the thrombosis into the larger vessel. We ran the risk, of course, of an acute collapse on the table. The patient stood it without shock, and returned to bed, with a very grave prognosis—first, because of acute pancreatitis, and second, because of the mesenteric thrombosis. The patient's relatives were informed of the probable outcome, but much to our surprise, the patient made a normal, uncomplicated recovery. There was peristalsis throughout the whole abdomen within 24 hours, and the patient convalesced as he would with an ordinary clean appendix. I believe the pancreatitis was secondary to the mesenteric thrombosis, or whatever that came from. I think that acute pancreatitis is, as a rule, secondary to something else.

I do not think that every case of pancreatitis is a surgical condition. The fact is, I think careful medical treatment, and nursing is usually to be prepared. But where surgery is used, I believe the procedure would have a less grave outcome, if the common bile duct were opened and drained with the hope of relieving the congestion in the surrounding area. However, where the pancreatitis is preceded, or caused by something else, whether it be mesenteric thrombosis, or other contiguous inflammation, I think that the "other

thing" should be looked for first in the treatment of this condition. Operations on the pancreas have a very high mortality, and thus my aversion to admit of primary surgical procedures on that organ. More papers of the kind that Dr. Massey has given us, give us food for thought, and make of us better doctors. I appreciate this opportunity to congratulate Dr. Massey.

Dr. T. H. Bates, Lake City:

I would like to ask just one or two questions with reference to the laboratory findings in cases of acute pancreatitis that have been diagnosed before operation or those that have been stumbled onto at operation. I am prompted to ask these questions because of a case that recently came to my notice in the practice of one of my friends. A four-year-old child presented the symptoms commonly seen in acute and severe acidosis. The family physician called in a pediatrician and a brother practitioner to see this child. As luck would have it, the brother practitioner went through a simple laboratory examination of the urine, and when he was shocked by the presence of a large amount of sugar decided a little blood chemistry would not be out of place. He noticed that the blood chemistry showed a very high sugar content, and in the hope of reducing that suggested that insulin be used. Much to his surprise and gratification heavy dosage of insulin very promptly cleared up the condition which he was pleased to call acute pancreatitis.

Dr. W. W. Massey, Quincy (concluding):

My object in presenting this paper was on account of the rarity of the condition. I have had no experience except just these three cases. It seems to be a rather rare condition. Very few men have met with this condition, and you will note from the report of the cases I had, I stumbled onto the acute pancreatitis. I did not suspect anything of that kind, except in the case of the gunshot wound, I did have an idea that probably the pancreas was ruptured.

As far as the laboratory study in these cases is concerned, I have had no experience.* Some of the laboratory technicians might be able to answer the question as to the laboratory findings in these cases.

I wish to thank the gentlemen for the discussions this morning. I think these discussions really are of great interest and I appreciate them.

FILARIASIS BANCROFTI*

E. STERLING NICHOL, M.D.,

Miami.

Filariasis is ordinarily considered to mean the condition resulting from infection with *filaria bancrofti*, sometimes called *Wuchereria bancrofti*, being a thread-like nematode which inhabits various parts of the lymphatic system in the adult form, while the larvæ or microfilariae circulate in the blood of the infected person. It should be borne in mind that there are numerous other members of the family Filariidae also capable of producing disease in man, for example *Loa loa* and *Dracunculus medinensis*.

Though some of the clinical features of the disease have been known since ancient times, it was only in 1863 that Demarquay discovered the larval forms of *filaria bancrofti*. During the next few years, Lewis and Wucherer made additional discoveries concerning the larvæ, but it was Bancroft who first recognized the adult worms in a lymphatic abscess. Then Manson demonstrated the transmission of the parasite by the mosquito.

The condition has been found in almost every tropical country, but is not strictly limited to the tropics, for in this country it has been found in many of the southern states and one case apparently endemic in Boston. Three cases harboring the parasite were found by Francis¹ in Tampa and two in Jacksonville, during a survey in this state about ten years ago. These cases, however, had lived formerly in either Cuba or Charleston, South Carolina. The latter spot has been the most famous endemic area in the United States. It is prevalent abroad in the West Indies, South and Central America, Arabia, China, India, Western Africa, Australia, and the South Pacific Islands.

In a given region the distribution of the infection is unequal, there frequently being endemic circumscribed areas where practically all the inhabitants have the micro filaria in their blood stream, contrasted to the surrounding area where the parasite is rarely found in spite of similar conditions and the presence of the same mosquitoes. And, too, there is a wide variation in the incidence of symptoms among the infected individuals, which accounts for such a wide divergence of reports from different countries on

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this point. Thus in Charleston, only 5% of the infected populace showed symptoms of filariasis according to Johnson,² while Bahr states that in Fiji, half the men and 20% of the women are afflicted.

Different mosquitoes apparently act as intermediate hosts in various places but in the United States and the West Indies the vector is *Culex quinquefasciatus*. The fact that this mosquito feeds at night is thought by some workers to explain the nocturnal periodicity of the microfilaria. In the Pacific Islands where the principal host is *Aedes variegatus*, there is no nocturnal periodicity, as this mosquito feeds by day.

The morphology and life cycle of the parasite have been described by many authors. The larvæ or microfilaria may be present in the peripheral blood of the infected individual in large numbers, as many as six hundred in a single drop of blood, or they may be few in number. They are about 300 microns in length and 8 microns in width, and are sheathed. When the infected person is bitten by the proper mosquito, the microfilaria are taken into the stomach of their new host and after losing their sheaths they migrate into the thorax. Here they develop into larger forms after several weeks, eventually escaping through the labium of the proboscis as the mosquito bites a new victim. Bahr has shown that the parasite may enter through the pores of the skin, invading the lymphatic vessels and glands, so that the bite is not essential. At this time, the microfilaria are about 1½ mm. long and 20 microns in width and their further development into adult worms is not fully known but growth is fairly rapid for clinical signs may appear as early as eight weeks afterwards. The adult female worms are 90 mm. in length and nearly 3 mm. in diameter, while the males are about half this size. They look like white hairs. One or dozens of worms may be present in the lymphatics or glands, and it is estimated they may live from 5 to 12 years. The females are fertilized by the males and contain uterine tubes which are filled with the sheathed eggs. From time to time numbers of the larvæ are given off into the lymph stream, and thence into the blood stream, completing the life cycle.

There is no racial resistance to the infection, nor any marked difference in sex susceptibility. The infection is rare in children under 10 years of age, but the youngest case reported was that of a 2-months-old baby in Japan.³ Lyon⁴ cited

one case of 7 years in a girl who had lived in Florida and New Jersey.

It is commonly agreed among students of filariasis that the microfilaria do no harm, but Stenhouse⁵ suggests that nephritis is a common sequel to the presence of the larvæ in the kidney, where they frequently are found in the day time. He emphasizes the prevalence of nocturia and urine of low specific gravity in cases of filariasis, in addition to the not infrequent finding of albumin and casts in the urine.

Most of the clinical manifestations are supposedly due to the presence of the adult worm, but the exact way in which the fibrosis of the lymph channels with obstruction to the flow of lymph occurs is still unknown. Some proof has been adduced that associated bacterial infection plays a large part in the production of morbid symptoms, but one of the best arguments against this conception is that of Romiti,⁶ who notes that in most cases operative wounds heal by first intention. The following are the main clinical manifestations usually encountered:

1. Acute lymphangitis and adenitis. There is usually some thickening of the affected tissues, and the usual features of lymphangitis are present. The fever subsides rapidly, but the adjacent lymph glands may remain enlarged and tender. The term "elephantoid fever" is sometimes used to cover this entity.

2. Varices of lymphatic vessels, productive of lymphatic tumors, such as inguinal and axillary glands, lymph scrotum and chylocele, are usually more insidious, but set in with fever. Aspiration of the tumor reveals chyle, and microfilaria may be found on examination of the fluid.

3. Chyluria is due to the obstruction of the lymphatics which in turn produces varices in the bladder lymphatics, leading to rupture, permitting the chyle to mix with the urine. The urine is milky in appearance, unless blood is also present, when a pinkish tinge is noted. Microfilaria may be found in the urine, but Kidd⁷ states that it may be taken for granted that if a patient has lived in the tropics at one time that the sudden appearance of chyluria means a filarial infection. It may come on suddenly many years after the patient has left the tropics. The fat droplets are extremely minute and can not always be distinguished under the microscope, but the fat can be extracted by ether and tested clinically. In recent years, a number of cases have been proven by ureteral catheterization to be of unilateral type.

4. Filarial abscesses may occur but a secondary infection can usually be demonstrated, usually streptococcic or staphylococcic in type.

5. Elephantiasis is the most important clinical manifestation of, or sequel to, filariasis bancrofti. The lower extremities are affected usually, but the arms, face, breasts and vulva may be involved. Pathologically, it is characterized at first by acute diffuse inflammation of the vascular and connective tissues, with edema and hyperplasia of the skin and subcutaneous tissue. Later there is a fibrous hypertrophy of the subcutaneous tissue. The modern view is that there must be a combination of lymphatic obstruction and bacterial infection in order that elephantiasis may develop.

According to Leiper,⁸ the first obvious clinical change is that of slight uniform enlargement of the affected limb. It appears edematous, is soft, and does not involve the foot, only the ankle and leg. Thickening of the skin is apparent at this time. There is no discomfort or disability, and loss of shapeliness is the chief disadvantage. If recurrent attacks of lymphangitis increase the lymph obstruction then the hypertrophy continues resulting in marked enlargement of the limb, or irregular contour, and great increase in weight. The skin becomes quite thick, and there is increase in the fatty and fibrous tissues and the lymphatics increase in size and number. The edema becomes hard instead of soft, and the foot becomes involved, forming the so-called riding boot.

In a still advanced phase of elephantiasis there is billowing out of the hypertrophied tissues, and ulceration may develop in the sulci, or a warty condition of the skin may develop. Finally there may be obliteration of all curvature of the limb due to the hypertrophy, especially around the ankle and the skin is enormously thickened and leathery, and the suggestion of an elephantine foot is realized. The patient may have to drag the affected member about with difficulty, owing to the enormous increase in weight. As the disease progresses the attacks of lymphangitis become less frequent.

The diagnosis of the clinical condition may be confirmed by examining a drop of blood from the finger or ear, stained thick smears using hematoxylin being satisfactory, or a fresh preparation may be used by making a vaseline ring around the drop on a slide and applying a cover slip. However, as stated above, the failure to find microfilariae does not prove the absence of the infection. (Owing to the nocturnal periodicity of filariae ban-

crofti, the smears are best made between midnight and 2 a. m. The blood usually shows an eosinophilia. The adult worms, either dead or alive, may be found in the glands or abscesses.

The treatment of filariasis is not very encouraging. A cool climate will usually ward off any advance in the condition. There is no known drug which destroys the adult worms, although recently O'Connor⁹ reported some success with the use of sulpharphenamine combined with novocaine, when injected in the site of inflammation on the limb of the patient. Sodium antimony tartrate, salvarsan, hectine and galyl are all capable of killing the microfilariae, but this obviously is not of much advantage if the adult worm is the culprit.

Surgical treatment is essentially the Kondoleon operation, which establishes a communication between the subcutaneous and deep tissues and also reduces the circumference of the limb by resection of wide wedges of tissue. Matas and Sistrunk in this country have popularized this operation, but it should be remembered that the youthful contour of the limb will not be restored.

The case I wish to report is that of Mrs. C. A. B., a married woman 25 years of age, referred on March 6th, 1930, from the Jackson Memorial Hospital because of periodic attacks of swelling of the lower extremities of three years' duration. During this time she had noted an increase in the size and change in contour of these appendages which she considered a residue of the various attacks. According to her statement, the swelling became pronounced for a day or so at intervals varying from weeks to months, so that she spoke of these occasions as "attacks." The onset of a typical attack was marked with a heavy malaise, and general aching and depression. The ankles, particularly the left, would become so swollen that the skin became tense. The feet did not swell but the legs were involved, and at times the abdomen seemed to increase in size; the upper extremities on some occasions showed swelling. There were no red streaks noted, nor areas of local tenderness, nor were glandular enlargements noted during the attacks. The skin over the ankles had lately become rather dry and exfoliation occurred at times. There was slight fever with the attack and she often felt chilly. The attacks occurred more often in the summer than winter months. She was born in Kentucky and had never resided elsewhere than Miami since the malady began, except for a short stay in the north

one summer. Headaches were occasional, no respiratory symptoms were noted, no visual changes noted. For several years she had, however, noted dyspnea on exertion, which seemed to be growing more pronounced, particularly on climbing stairs, and palpitation might intervene, but there was no precordial distress. She felt more or less nervous, but the appetite was good and she slept well. The menstrual history was normal. There were no gastro-intestinal complaints. She did notice frequency of urine and nocturia at times, but not related to the attacks of swelling. Her weight had gradually increased during the three years of her illness from 125 to 145 pounds.

The past history was irrelevant except for the following: She had measles and chicken pox in childhood and frequent sore throat later on. Her first child lived only a few hours (7 years ago), and her second child, who was 4 years old, was apparently healthy. The attacks of swelling started a year after this birth, and no history of infection was obtained.

On examination, a sclerotic change in the subcutaneous tissues of the lower extremities was quite obvious, and it was evident that the legs were of abnormal contour, and the ankles swollen. The feet were normal in appearance. These changes were more marked on the left than right side, and the circumference measurements of ankle, calf, knee and thigh were about 1 to 2 cm. larger on the left. The tissues, however, did not pit on pressure. No local tenderness, enlarged glands, nor dilated veins were noted. The pedal pulses were normal. There was no cyanosis of the extremities noted, but rather a pallor of the skin. Even the subcutaneous tissues of the lower abdomen on palpation seemed slightly indurated.

The hair was of normal texture and distribution. The eyes were normal, and ophthalmoscopic examination showed no abnormalities. A few teeth had been extracted, and the remaining dentition seemed normal. Remnants of tonsil tissue were present in the throat. The chest and lungs were normal. The heart borders on percussion were defined within normal limits, and the only cardiac abnormality was a systolic murmur at the apex transmitted toward the left axilla. Exercise accentuated this murmur. The blood pressure was 110/80. Abdominal examination showed no abnormalities nor enlargement of the organs. Pelvic examination showed no changes other than slight induration of the labia. The

joints were normal. Neurological examination showed no abnormalities.

X-ray examination by Dr. Gerard Raap indicated several foci of infection present in the teeth, but the nasal accessory sinuses were normal in appearance. A teleroentgenogram of the chest showed the transverse diameter of the thorax 26 cm., the left cardiac diameter, 8 cm., the right, 4 cm., the longitudinally oblique, 13 cm. The diaphragm contours were smooth, the bony framework normal. The lung fields did not show any evidence of gross pathology with the exception of an old healed tuberculous lesion in the extreme left apex which apparently at this time was not active. Examination of the kidney and bladder regions showed both kidneys distinctly outlined and normal in size, shape, position and contour.

A normal electrocardiogram was obtained. The basal metabolic rate on two occasions was plus 4%. Urinalysis was normal, though a urine concentration series, after 15-hours water-fast, revealed an inability to concentrate above a specific gravity of 1020. The blood Kahn was negative. The blood non-protein-nitrogen was 19 mg. per 100 c.c. of blood, and the serum calcium was 11 mg. A blood count showed 4,400,000 red cells, 75% hemoglobin (Dare), 8,300 leucocytes of which 85% were polymorphonuclears, 14% lymphocytes, and 1% eosinophiles.

At this juncture the clinical impression wavered between a chronic low grade thrombophlebitis in the lower extremities and rheumatic heart disease with decompensation, in spite of the history she gave of attempts to relieve the swelling with digitalis resulting in failure and toxic manifestations. Nephrosis was ruled out by the absence of albuminuria. Myxedema was considered, but ruled out by the metabolic readings.

The diagnosis of filariasis productive of lymphectasis and beginning elephantiasis then suggested itself, and was confirmed by examining thick blood smears taken at midnight on March 21st, in which microfilariae bancrofti were found.

This case is atypical in that the attacks of lymphangitis are not demonstrated by the usual superficial red streaks and point of local inflammation, but the nature of her malady can not be questioned.

The rather low specific gravity of the urine of this patient and her tendency to nocturia suggest the possibility that she may also have a filarial nephritis, as suggested by the observation of

Stenhouse. Further studies of the kidney function are contemplated.

Treatment has been too brief to warrant discussion at this time.

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DISCUSSION

Dr. Henry E. Palmer, Tallahassee:

I have been very much interested in the case so ably described by Dr. Nichol. My interest in these cases was aroused several weeks ago by a case which I found near Lake Jackson, about ten miles out from Tallahassee. From diligent inquiry, it is the only case that I have any knowledge of occurring in north Florida.

The patient was Queen Ann Allen, colored female, age 58, married, mother of one child. History showed no miscarriages or evidence of specific disease. She had always been healthy, attending not only to her household duties, but also assisting as a plow hand during crop seasons. In 1910 she weighed 225 pounds; she had steadily gained thereafter until she weighed 340 pounds.

No symptoms of present disease until 1919, when a "kernel" in her right leg, up near inguinal fold, became swollen and sore. Had fever, and was sick two or three weeks, when soreness subsided. Leg then began to swell. I was consulted for the following symptoms: shortness of breath, nausea, inability to sleep, rapid heart action, and general discomfort. Examination revealed the following condition: Very large black woman; rapid respiration; no fever; pulse 140—rapid, but regular; complaining of chest pains; blood pressure, systolic, 220; diastolic, 170; urine, Sp. Gr., 1010; albumen present, no sugar. I did not have

her blood examined. Under proper diet, diuretics, digitalis and mild hypnotic, she improved and became very comfortable.

What interested me most was the bigness of the woman, not only in spots but all over—chest, waist line, arms and legs.

Waist line, 60 inches; weight, 340; right leg, thigh, 39 inches; knee, 33 inches; just below knee, 26 inches; calf, 36 inches; ankle, 30 inches; left leg, thigh, 39 inches; knee, 33 inches; just below knee, 24 inches; calf, 22 inches, ankle, 15 inches.

You will observe the immense size of right leg from knee to ankle. A typical case of elephantiasis, with hard, dry, scaly skin; not painful, no erosions, did not pit. Moved about the room with difficulty, was about roomfast.

Pathology: In elephantiasis, the changes are those of lymph stasis plus those of secondary bacterial infection; and the predominant changes are edema, dilatation of the lymphatics, and cellular increase, with sclerosis. At first, only the skin and subcutaneous tissue are involved. In early cases, section allows the escape of a large amount of clear, coagulable fluid from the dilated lymphatic spaces and the connective tissue, as though the tissue had been injected with gelatine. In later cases, the fibrous tissue predominates; the skin is thickened and fibrous; and the subcutaneous tissue is replaced by trabeculae of fibrous and fatty tissue enclosing spaces filled with yellowish, oily material; and the whole subcutaneous area exudes lymph. The bones and muscles are involved only late in the condition. The bones may be deformed and hypertrophied, and the ligaments may be ossified; the muscles are atrophied or hypertrophied and pale and flabby. The arteries are dilated. Neuromas are common.

Microscopically, the lymph vessels early show round cell infiltration, with reaction on the part of the connective tissue cells. Later there is increase in the amount of fibrous tissue in their walls. The epidermis may show little change, or it may be hypertrophied or atrophied. The cutis is fibrous and is filled with dilated lymph spaces. The arteries show peri-arteritis, and endarteritis. The muscles show cellular infiltration and fatty degeneration. Adult filariae, and microfilariae may be found in the tissues in elephantiasis.

History: The condition of the leg and scrotum which we know as elephantiasis was known in India in ancient times. Celsus used the term

"elephantiasis" for leprosy; and for a long time there was confusion between leprosy (*elephantiasis graecorum*) and true elephantiasis (*elephantiasis arabum*). Various writers pointed out that the two conditions were distinct; and in 1750 Hillary gave a clear description of the development of elephantiasis of the leg, and differentiated it from leprosy. Other writers confirmed Hillary, and described elephantiasis of the scrotum and other parts of the body.

Prophylaxis: Persons with microfilariæ in the peripheral blood are a source of danger to others, whether or not they have symptoms, and should be required to sleep under mosquito nets and to take every precaution to avoid infecting mosquitoes.

Treatment: No treatment has any effect on adult worms. As the majority of persons have no symptoms at all, all that can be done is to prevent re-infection and to keep up the general condition until the worms die.

A 1:50 solution of sodium antimony tartrate intravenously will inhibit or destroy the microfilariæ. It is not known whether or not it affects the adult worms.

GONORRHEA IN WOMAN*

JOHN E. HALL, M.D.,
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My subject concerns the oldest and most dishonorable of all known diseases, and could it personify itself, it might in order to establish its ancient origin, use the words our divine Lord used when he said: "Before Abraham was, I am," for we find in the fifteenth chapter of Leviticus, Moses giving laws to the Children of Israel as to how they must conduct themselves, when infected with this disease.

This ancient disease of ill repute is gonorrhea; and both profane and sacred history down throughout the ages abound with numerous references to it.

Hippocrates, four hundred years before Christ, gave an excellent description of its symptoms and instructions as to its cure.

Ancient Rome, as well as Egypt, was familiar with it, and history informs us that no less famous beauty than Cleopatra herself had the misfortune to contract it, and in turn transmitted it to that incomparable Roman soldier and statesman, Marc

Anthony, who instead of being resentful on account of the infection, became so enamored of Egypt's beautiful queen, that he refused the throne of the world's greatest empire that he might linger to worship at her shrine.

Century succeeded century, and coming down to more modern times, we find it again recorded that another great and powerful queen acquired it. She was none other than the proud Elizabeth of England, known as the "Virgin Queen." How she acquired it, being "virgin", history does not inform us. However, it is a well-known fact that the queen was very much infatuated with Sir Walter Raleigh, and that Sir Walter was a "keen blade." Taking these facts, and subsequent events into consideration, it is not at all improbable that Sir Walter might have contracted it from some lady-in-waiting and transmitted it to his royal lover. Should it be so, one may well understand the queen's ire, which prompted her to send him to the Tower of London to die under the headsman's axe, to atone for his defection and indiscretion.

Another royal victim was Catherine the Great, of Russia, who it is said, contracted it in spite of the watchful care of the physicians of the royal household, whose duties demanded that they exercise great care in the selection of the young men who were nightly sent in to gratify the queen's insatiable desire. It is safe to assume that these unfortunate physicians paid the penalty for their carelessness in having passed a diseased subject on to enjoy the pleasures of the royal couch.

On account of its great antiquity, reaching back as it does beyond all history, one would suppose that it should have received from the physicians throughout the ages profound study as to its treatment and control. The converse, however, is true, and no other disease has been accorded the slight attention that this dire malady has.

My paper deals with gonorrhea in woman, and there are several factors responsible for its being more formidable in woman than in man.

First, she is, as a rule, ignorant of the disease, and since all women have leucorrhea to a more or less extent, she does not realize that she is diseased until after the inflammatory process has spread upward and the pelvic organs have become hopelessly involved.

Second, her initial symptoms are very much milder than in man, and she, prevented by inher-

*Read before the East Coast Medical Association, Daytona Beach, June 14, 1929.

ent modesty, does not seek medical attention as early as does man.

Third, nature herself is seemingly allied against woman, placing her at a disadvantage that man escapes. This handicap is menstruation, which prevents treatment during her menstrual period, and also, aggravates the disease.

Fourth, and foremost amongst all other factors, is the tendency of physicians not to accord woman adequate examination when consulted by her on account of uterine involvement.

Such examination usually consists in placing her upon a table, introducing a speculum and exposing the cervix, without, however, taking smears from the cervical canal and urethra for microscopical examination. She is, in all probability, asked a few questions as to her menses; duration of, quantity, pain associated with, etc., told she has "leucorrhea," and some form of vaginal douche is prescribed; and assured she will soon be all right.

This is a pernicious procedure, since if it be gonorrhea, we are, by not instituting early treatment, eliminating the only chance she may have of recovery.

We do not even explain to her that "leucorrhea" is only a symptom, and not a disease. Should the patient, however, have an investigative mind and be inclined to question us as to the causes of her symptoms and her leucorrhea, we lightly explain it as being due to a catarrhal condition of the womb, or to uterine displacement; pain in the urethra, or frequency of urination as being due to cystitis, highly acid urine, or ante-flexion or version of the uterus, causing undue pressure upon the bladder, or some other equally vague and indefinite cause.

The indifference of the profession toward gonorrhea in woman can only be explained by the lack of appreciation as to its significance as a cause of pelvic inflammation.

One is tempted to believe that it must have been chronic gonorrheal endometritis with an associated menorrhagia, that the physicians of old treated in the woman, spoken of by Saint Luke, eighth chapter and 43rd verse. This verse reads: "And a woman having an issue of blood for twelve years, which had spent all her living upon physicians, neither could be healed of any." If so, these ancient brethren of ours found gonorrhea as difficult to eradicate as we are finding it in modern times. These old time physicians had, according to Holy Writ, no hesitancy in taking

the patient's money, even if they did not give results, thereby differing from the physicians of today.

There is another reason why the diagnosis of gonorrhea is not made as frequently as it should be in woman, and that is, unless she is a prostitute or a woman of known lax morals, we are inclined to regard her, like Cæsar's wife, as "above suspicion." It is in these cases among married women that we are especially prone to make our diagnosis of "leucorrhea," overlooking the fact that the vast majority of husbands have had gonorrhea, that it is a well-established fact that most of them are still infectious.

As to the prevalence of gonorrhea in woman: Noegerath, in 1872, stated that 80 per cent of all men had gonorrhea, that gonorrhea was an incurable condition, and concluded that all men who had gonorrhea gave it to their wives. Neisser examined 527 women who showed no visible evidence of the disease, and found gonococci present in 126. There is no accurate method of compiling statistics, for obvious reasons; but suffice it to say that the percentage of affected women is enormous, is steadily increasing, and will continue to do so until the profession wakes up to the gravity of the situation and realizes that gonorrhea is not of minor importance, but that it is really a grave disease, demanding a correct early diagnosis, followed by intelligent treatment. Until this happens, gonorrhea will continue being the grave menace to society that it is today.

According to Finger, the parts primarily involved in order of their frequency are: the urethra, cervix, and Bartholin's glands. Watson, of Glasgow, claims that the cervix is the original site of the disease, and gives in order of their frequency, the cervix, urethra, and Bartholin's glands. He says that the cervix is inoculated in nearly all infections of adults, and that in the few cases in which the urethra is the primary seat of infection, the cervix is soon implicated and becomes the main source of danger. According to Baermann, the cervical canal is the only part infected in 46 per cent of female gonorrhea.

A recently infected cervix presents a picture of an acute catarrhal inflammation, the mucous membrane being swollen and dull red, and pus is seen exuding from the external os. The cervix bleeds easily, and manipulation necessary for examination causes pain.

The gonococci spread rapidly to the subepithelial tissues, from which it is practically impos-

sible to dislodge them. The gonorrheal process may be limited to an endocervicitis, or it may extend to the cavity of the uterus, giving rise to an acute endometritis, or to an acute metritis, in which the muscular tissue of the uterus is invaded by the way of the lymphatics. Menge states that the cervical mucus acts as a barrier to all microbes, with the exception of the gonococcus alone. The acute cervicitis subsides into a chronic condition, and this is the most common seat of chronic gonorrhea in woman.

Dr. J. Henry Litterer, of Nashville, and I had the opportunity of examining a large number of women, chronically infected, over a period of time extending many months, and this is what we found: The majority of these women failed to show the presence of gonococci in smears taken in the intervals between menstruation, but practically one hundred per cent showed them in smears taken from the cervical canals, within twenty-four hours following the cessation of the menstrual flow.

This is the explanation of the many cases of infection in men, from women who fail to show evidences of gonorrheal involvement of the external genitals. These infections take place following coitus, immediately after menstruation, as the secretions are more infectious at this time than at any other time.

As to vaginitis: it has long been contended that the adult vagina is peculiarly resistive to the gonococcus, due to its being covered by pavement epithelium and to its absence of glands.

The secretion of the vagina is acid in reaction, due to the lactic acid properties of the bacillus of Doderlein, which normally inhabit the adult vagina. Gonococci do not thrive in an acid medium, and it has been taught that a gonorrheal vaginitis never occurs between puberty and the menopause, on account of the acidity of the vaginal secretions inhibiting the action of these micro-organisms.

This theory has recently been exploded by the scientific investigations of the Government Venereological Institute, of Moscow, Russia.

Their conclusions are these: both acute and chronic gonorrhea in adult women is accompanied by vaginitis. The acidity of the vaginal secretions does not prevent involvement of the vaginal mucosa. Gonorrheal infection may remain for an indefinitely long period of time, hidden under the epithelial lining of the vagina. Gonorrheal vaginitis may be cured, but this necessitates long

and careful attention in order to bring about this result.

Cystitis of gonorrheal origin is an exceedingly rare condition, and, unless the resistive power of the bladder epithelium is reduced by injury or disease, it is able to overcome the gonococcal invasion.

Bartholinitis is a very common complication. Chronic Bartholinitis is one of the common forms of latent gonorrhea by which women who are apparently healthy cause gonorrheal infection in man. Chronic infection of this gland presents no symptoms, except when retention cysts form, and a woman may be totally ignorant of her infectious condition.

Endometritis.—Bumm was responsible for the teaching that gonorrheal involvement was usually limited to the cervix, and that the inside of the uterine body was rarely involved. He said that the internal os formed a barrier, beyond which the inflammation seldom extended, and that when upward extension did occur, it was the tubes and ovaries affected rather than the uterine mucosa. He thought the uterine mucosa was unfavorable ground for the propagation of gonococci, but admitted it was capable of passing the infection on to the Fallopian tubes.

Wertheim's views were diametrically opposed to those held by Bumm, and he had no hesitation in stating that Bumm had no reason, from a histological point of view, to support his teachings, claiming that the endometrium is a most favorable field for gonococcal propagation, and also, that there is no closed sphincter to separate the cervix from the cavity of the uterus. He also says that there are no symptoms by which one can distinguish between endocervicitis and endometritis, and further says that the vast majority of cases of endocervicitis is accompanied by endometritis.

Concerning salpingitis: I desire to call attention to an assertion made by Watson, of Glasgow, who says: "In acute purulent salpingitis, pus escapes from both ends of the tube. Where the pus escapes into the pelvis there is a plastic peritonitis produced, with rapid formation of adhesions, closing the internal os and preventing further leakage from that end. The uterine end also becomes occluded, converting the tube into a pus sac. The symptoms gradually subside after this happens; and after two or three months the contents of the tube become sterile, and gradual absorption takes place. This being the rule in gonococcal salpingitis, palliative treatment in

contradistinction to operative treatment is indicated. Operative procedure in gonorrheal salpingitis is one of the errors of modern gynecologic surgery."

Treatment: This is only taken up to show the inefficacy of the method of treatment as instituted today.

McDonagh, of London, states that canterization of the cervix with nitrate of silver or iodine does no good, and that under no circumstances should the cervix ever be dilated in a case of cervicitis, or endometritis, for the purpose of painting the inner surface of the cervical canal, or the interior of the uterus with strong antiseptics. The reason, so he states, that they do no good is, they only kill the gonococci they come in contact with, and do not penetrate deeply enough into the connective and muscular tissue to affect the micro-organisms. McDonagh says they can only be reached by the blood stream, and that as we have no drug in the treatment of gonorrhea analogous to salvarsan in syphilis, we are forced to admit that chronic gonorrhea in woman is beyond our assistance at present.

He advocates the use of vaccines, as he says they increase the patient's natural protective powers; that they, no doubt, check the spread of the disease. He qualifies his statements, however, by saying that the brilliant results sometimes obtained by some observers are far from being universal.

Marshall, of London, says the results from the use of vaccines have been far from favorable, and that while this form of treatment is rational, the results are uncertain, and this treatment cannot be said to be established on a scientific basis.

Diathermy was heralded for a time as being the chief agency offering hope of gonococcal eradication, but this, too, has proved to be limited in its action.

The dyes, likewise, were held forth as being the only method of treatment by which the micro-organisms might be reached, after penetration of the subepithelial tissues, but these, also, have largely been discarded.

Perhaps, the hopelessness of cure in chronic gonorrhea in woman may be held responsible for the indifference of the profession in the treatment of this disease, but it cannot be offered as an excuse for our negligence in not making a thorough examination when consulted in the early stages of her infection. It is only during this

early stage that hope of effecting a cure may be held forth to her.

Sir William Osler, in his annual address before the Medical Society of London, on May 16th, 1917, had this to say relative to our carelessness in the treatment of venereal diseases: "Man wages keen warfare against all other infections, except gonorrhea and syphilis alone. Centuries of science have made venereal diseases taboo. The treatment of gonorrhea especially is administered in a hopelessly apathetic manner. From the standpoint of race conservation gonorrhea is a disease of the very first rank, causing from 30 to 40 per cent of all cases of congenital blindness, the majority of pelvic inflammation in women, and the unhappiness associated with sterile marriages. With these and many minor ailments scored against it, we may say that, while not a killer, as a misery producer Neisser's gonococcus is king among the germs."

NON-UNION OF FRACTURES*

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Pensacola.

It is my purpose in presenting this paper to open a discussion on a subject which is always bobbing up in the regular practice of every surgeon. And if we were absolutely certain that we could prevent delay and non-union in fractures much worry could be eliminated from the life of every surgeon called upon to treat fractures.

The healing of fractures in which the fragments of bone are restored to their proper position is accomplished with but little disturbance of their normal relations, but when the fragments are not kept in apposition, or when the general condition of the patient is unsatisfactory, the union of fragments may be prevented and ununited fractures result. And if the vital energy of the bone-forming elements is not sufficient to form bony union, the callus remains fibrous and non-union results.

In non-union there may be perfect apposition and perfect alignment as in fractures of the middle third of the humerus, and in the lower third of the tibia. Or there may be want of apposition, as when the intact fibula or ulna keeps apart the fragments of the tibia or radius.

Non-union is said to exist if after the lapse of several months there has been no attempt at bony union at all, or there has been fibrous union, which

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permits motion at the fracture site, or a false joint remains, or the X-ray shows no callus formation.

Now, what is the etiology of non-union? Much work has been done in this field and the subject has been variously treated by brilliant men during the past decade, and each surgeon has his own ideas about predominating causative factors, which vary with different cases.

The causes may be local or general. That the local cause is at times not to be denied is shown by the non-union of the tibia in fracture of both bones of the leg, while the fibula unites firmly in the usual time, and no mechanical cause of non-union is apparent in the tibia.

Other local causes in order of their frequency are: interposition of soft parts as torn periosteum; fascia or muscle tissue; fixation by metal internal splints as plates, wires, screws, etc.; wide separation of fractured ends; loss of bone substance as in severe compound fractures; churning of the fragment ends; imperfect immobilization and inadequate reduction of recent fractures; too early removal of a cast where gravity is an important factor.

Compounding of a fracture to apply internal splints often leads to non-union, but the non-union is usually due to the foreign body and not to the infection which follows at times: suppuration in the bone ends in compound bone injuries; union in bad position of one of the paired bones; over-extension or too prolonged extension as in fractures of the humerus; muscle pull on paired bones as in the lower end of the forearm; want of rest; a delayed union may result in non-union because of frequent meddlesome examinations; want of blood supply in cases where the nutrient artery is torn or a thrombus forms in a vein near the fracture site; defective innervation from destruction of nerve tissue; tight bandaging interfering with proper circulation, and local bone diseases as osteoporosis, osteomalacia, rickets, osteomyelitis, scurvy, tuberculosis, lues, etc.

The general causes are those factors which interfere with osteogenesis when the site of the deficiency is not in the fractured ends. Such factors are deficiency of blood calcium and phosphorus. Kellogg Speed experimented on dogs with fractures and proved that the peripheral blood calcium-phosphorus product has little, if anything, to do with the proper healing of the bones of dogs, under strict experimental and dietary control.

Peterson, on the other hand, convinced himself

that when the blood calcium-phosphorus product was below 35 mgs. per 100 c.c. of blood that non-union would result.

Baj studied the calcium content of the blood in normal individuals and also those with fractures. He found that the calcium content rose immediately after fracture, varying from an average of 8.4 to 10.2 mgs. per 100 c.c. blood, reaching its maximum on the 18th to 22nd day after fracture, then decreasing gradually to normal. The fall to normal was always delayed, however, until the fractures were clinically healed.

Leriche thought that a bone transplant raised the local calcium content and was an aid to bony union, but this idea has been contradicted by animal experimentation by Halparin and Walsh. These authors suggested that the removal of the thyroid and parathyroids may help induce non-union.

Fontaine reported eight cases of delayed union and pseudoarthrosis which were successfully treated by periarthral sympathectomy when other methods of treatment, including open operation, failed. Kellogg Speed states that mild infections occurring after operations upon ununited fractures may lead to solid bone union and believes that the acid formation of the infection leads to increased calcium salts which unite with the already present calcium due to the venous blood at the site of fracture, causing a precipitation which results in bony union.

The treatment of ununited fractures depends, of course, upon the cause.

The success of treatment, after the bone ends have been accurately approximated, depends entirely on the production by the body of callus which is adequate in quantity and in quality of density; failing this, no mechanical device will long resist severe external stress, such as the effects of gravity or powerful muscle contractions.

Before undertaking an operation it is necessary to be sure that one is dealing with true non-union, not merely delayed union. This distinction is not merely one of time, but we must be guided by the amount of motion and by X-ray evidence, for in the absence of mechanical hindrances a fracture which has been inert for months may suddenly unite, but in non-union there is either no attempt at repair, or a fibrous union, or a false joint.

When metal internal splints are contemplated it is to be remembered that this form of

treatment is best for temporary use and they should be removed as soon as they have done their work which consists only of fixation until enough callus has formed to hold the fragments together.

The general condition of the patient should be considered from every angle and while syphilis is a rare cause it should not be overlooked. Individuals having a fracture of bone depending on lues as an etiological factor, rarely have evident syphilitic disease and syphilis must be searched for with painstaking care. X-ray evidences may be found in other bones than those fractured.

Everything possible should be done to stimulate the bone-forming elements of the body, such as the giving of tonics, phosphorous in 1/100 grain doses, calcium as medicine and in foods rich in it as milk, irradiated ergosterol, etc.

Now as to choice of operation for non-union, the following methods should first be considered: If there is a reasonable likelihood that union will take place and if there is not great loss of function, no great deformity and some prospects of callus formation, then one should wait and see if union will occur. Non-operative procedures to stimulate bone repair should be instituted and consist of the following:

Palliative congestion by the Thomas method of tying rubber tubing above and below the site of fracture and percussion with a hammer. This is known as 'Thomas' damming and hammer method.

Bier's method is that of applying rubber bandage above the fracture. By plaster-of-paris bandage, splint is secured with a window at site of fracture.

Massage and percussion, if painless, and rubbing the ends of the fragments together may be tried. Balanced suspension and extension in cases of comminuted fracture are conducive to union.

Local irritation at the fracture site is also valuable. This may be obtained by guarded use of the part in some sort of splint or support so that irritation may be developed locally in the long axis of the bone, not in the lateral axis which might cause increasing angulation and deformity from contra-axial strain. In leg fractures, ambulatory splints and Delbet's splints are helpful.

Dry and moist heat may be of service. Light therapy by means of a quartz lamp may have a general improving effect and the light need not shine directly on the fracture field. This therapy certainly helps the septic and marasmic patients.

A hypodermic or intraosseous injection of irri-

nants at the site of ununited fracture is still used as a non-operative method to bring about a cure. Such materials as the patient's own blood, tincture of iodine, bone marrow extracts, phosphates, and emulsion in oil of dried bone are employed. These may promote local bone-forming reaction and lead to union but must be accompanied by proper methods of immobilization and supervised splinting.

If these methods fail we must resort to the operative methods with the following considerations in mind.

As much data as possible concerning the condition of the bone should be collected and a careful X-ray study is always to the best interest of the patient and doctor. If there is any trace of inflammation found, operation must be postponed until it has cleared up. This may be tested for by active and passive movements, brisk massage and the elastic tourniquet. These maneuvers reveal latent infections in nearly all cases. If latent infection is found, one should wait at least three months or more, and during this period active and passive congestion may be secured and the functions of the muscles, nerves and joints encouraged and everything possible done to hasten the cure of the infection.

It is needless to say that the strictest asepsis is necessary in all bone operations, and the simplest operation in bone work is always the best. After the removal of sclerosed tissue on the ends of the bones, drilling the bones at many points, especially laying the medullary cavity open, placing bones in firm contact and immobilizing them securely by proper external splints will occasionally secure union.

Rarely is the use of metallic devices, as plates, wire, screws, bolts, etc., necessary, but they should be regarded as merely helping to secure fixation of fragments and all the objections to the use of metallic appliances in the treatment of recent fractures will apply much more emphatically in the case of ununited fractures. They are to be used as fixative devices only, but when internal fixation is necessary it may be brought about by means of metal, ivory or bone splints, but it is far better to use the patient's own bone. The method of application of the graft may be intramedullary, sliding, inlay or onlay graft, osteoperiosteal grafts and bone hash. In using bone grafts it is needless to use suture material which cannot be absorbed within a reasonable length of time. Bone hash often fills in an hiatus left after freshening bone

ends and saves the necessity for resection and shortening of a companion bone as fibula or ulna. All open operations for non-union after fracture require careful, solid, prolonged external splinting.

Plaster-of-paris is the very best material to use and should be extensive and of heavy enough structure to withstand prolonged use. The immobilization must be prolonged for even slight, too early motion after a well-planned and executed operative treatment for non-union may mitigate against a successful result. In fractures with great loss of substance Albee's method of transplantation of autogenous living bone is par excellence, the most satisfactory procedure. Intramedullary pegs, both long and short, are to be recommended, especially the long pegs in fractures of the femur as used by Hey Graves. Step cutting bone to allow bony apposition is useful, shortening of one bone to permit apposition of fragments of another bone as in fracture of the radius.

Some operations fail because the bone has been ununited too long; its ends are too sclerosed; it must be cut back too far to bring any fresh bony tissue into view. The intrinsic osteogenetic power of the bone may be lost, probably on account of prolonged atrophy from disuse or deficient blood supply. Naturally, the longer the gap which the surgeon attempts to bridge in an old ununited fracture, the greater the chance of failure.

Bone transplants and internal splints are really not required in every case, and it is far better to omit them where it is possible to obtain any end-to-end contact between freshened fragments. They are necessary to bridge distance, to lend security after the replacement of fragments, or, as in the radius, to prevent rotation and angulation of major fragments until union follows.

Conclusions: General causes play a minor role in non-union of fractures. Inadequate reduction and immobilization of recent fractures play a major role in producing non-union. The use of metal internal splints is an obsolete practice. The simplest method of treatment in operative bone work is usually the best. Where internal splints are needed the living autogenous bone is by far the best.

Always be patient in allowing a fracture to heal, particularly in femur and tibia.

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PERFORATION OF THE CAECUM BY A TOOTH PICK—CASE REPORT*

T. H. WALLIS, M.D.,

Ocala.

I am presenting this case, not because of the surgical technique but because it is unusual in many respects, both as to the cause of the symptoms, the lack of history, the location of the pathology found, and the possibility of swallowing foreign bodies unconsciously.

Mr. J., who had been in excellent health prior to April 2, 1930, when at work was seized with a sharp pain in his abdomen at about 2 p. m. This pain was located entirely in the right side and it felt as though a knife were being stuck into his side. The pain continued to come in paroxysms lasting for a few minutes, then going away for a few minutes only to recur again. This lasted about one hour, then disappeared completely.

On retiring that night, he had a similar attack of pain in the same location accompanied by nausea, but no vomiting. This attack lasted several hours and finally disappeared, leaving his right side very sore and painful.

The following morning he awoke free from all pain but with considerable tenderness over his right side. He was able to go to work, and worked the whole day without much discomfort.

On April 4th, two days after the first attack, while at work, he was seized with a violent paroxysm of right-sided pain accompanied by the desire to vomit, which he did not do. Pain was so intense that he had to lie down on the ground and double up in a knot with his legs fixed on his abdomen, in order to get any relief. He also complained of numbness of his right leg. He was immedi-

*Read before the Staff of the Monroe Memorial Hospital, Ocala, May 14, 1930.

ately put into a truck and carried four miles to a doctor who, after examination of the urine, diagnosed the case as appendicitis. He was then given $\frac{1}{2}$ grain of morphine and put in an automobile and brought 78 miles to the hospital, where I first saw him.

On admission, he was found to be an extremely large white male about six feet, weighing 190 pounds and 35 years of age. He held his right hand tightly against his right side in the region of his appendix. His body was bent to the right and every move of it was intensely painful.

Past history: Essentially negative.

Physical examination: Eyes, ears, nose, throat, neck, negative. Chest, well developed, expansion equal on both sides, no dullness, lagging or retracting. In the region of the larger bronchi, both anteriorly and posteriorly, there were many mucous rales, the periphery of the lungs were negative. Heart, rate 90, regular in rate and rhythm; apparently no enlargement, thrills, murmurs or abnormal breath sounds. Abdomen, large and slightly protuberant. The right rectus muscle was tense and rigid, the left rectus being a little more relaxed. When asked where the pain was he pointed to a definite spot, located half way between the anterior superior spine and the umbilicus.

On palpating this area there was a marked rigidity and a great amount of pain on the slightest pressure.

The left side of the abdomen was not painful unless it was palpated toward the right side and then he complained of pain in the right side.

Genitalia: negative.

Extremities: negative except that the right leg was slightly flexed on the abdomen and he complained of a slight numbness.

Urine analysis: Sp. G. 1.028 acid, heavy trace of albumen, few epithelial cells and urate crystals.

Blood examination: total W.B.C. 16,000, N. 80 S. 18 L. 2.

A diagnosis of acute appendicitis with possible rupture was made.

Was taken to the operating room six hours after the beginning of the last attack. Under ether anesthesia, right rectus incision, about four inches long was made. On opening the abdomen a serosanguineous fluid exuded with a slightly fecal odor.

The upper, lower, and left abdomen were walled off with sponges, and the hand inserted into

the wound in the region of the caecum in an effort to locate the appendix. There were numerous newly formed adhesions and the caecum was tightly bound down to the right side. In the region of the ilio caecal junction a small hard object was felt free in the abdomen. It was about the size of a match. On removal from the cavity it was found to be a whole tooth pick of the round, pointed-end variety, stained with fecal material.

The caecum was freed up and inspected, at a point on the posterior surface about half the distance between the ilio caecal junction and the appendix was found a perforation of the caecum about the size of a tooth pick with an area of induration about it and fecal matter exuding from the hole.

This opening was closed with silk suture, using both an anti-leak and approximation suture.

The appendix was found to be very small, retrocaecal and tightly bound down with adhesions, and was not removed because of the existing contamination, its innocent condition and its inaccessibility.

The abdomen was closed in layers with No. 2 chromic and silk worm gut in the skin, after first inserting rubber tube drainage in the region of the perforation and in the right iliac fossa.

The recovery was uneventful except for considerable distention for the first four days with an associated bronchitis and temperature ranging from 101° to 103°.

On the tenth day following operation the patient was allowed to get up and on the twelfth day was discharged in excellent condition.

On questioning this patient, post-operatively, he denied ever having swallowed a tooth pick. He stated that frequently he uses tooth picks following a meal and sometimes drops off to sleep with one in his mouth and if his wife does not remove it, he awakens and finds it there. Also that occasionally he eats sandwiches which are held together by toothpicks. Evidently he either ate a sandwich including the tooth pick or he fell asleep with a pick in his mouth and his wife failed to do her duty by removing it, so that he swallowed it while asleep.

Three points of interest are shown.

1st. The danger of using tooth picks in making sandwiches, and danger of sleeping with them in your mouth and the possibility of unconsciously swallowing them.

2nd. The peculiar location of the perforation

which was so closely associated with the appendix that it was diagnosed as ruptured appendicitis.

3rd. The finding of the tooth pick, which to me was a matter of luck and not skill, for many of you who have searched for a needle in the finger for hours, and know how difficult it is to locate a small foreign body in a small place will realize what odds are against your finding it in the abdominal cavity. Had the tooth pick not been found, I would still be in the dark as to the actual cause of this unusual perforation.

In closing, let me caution you if you are a tooth pick user to be sure your wife is faithful in her duties, or tie a string to your tooth pick when not in use.

SOME DUTIES OF THE OBSTETRICIAN*

H. QUILLIAN JONES, M.D.,
Ft. Myers.

In accepting your kind invitation as one of your speakers tonight, the question very naturally presented itself, "What shall I talk about?" In medicine one could talk forever and never get through. Most any medical subject to medical men should be interesting. Acidosis, the endocrines, the general subject of costiveness would all receive their proper merit. A phase of urology or the surgeon's problem might equally be rewarded. In selecting this subject it was anticipated that the men in these communities are doing more or less general work and in that way all of you are coming into constant contact, more or less, with obstetrics. In this way, we might find the subject mutual and vital to us all.

I am reminded of a beautiful toast, "Here's to God's first thought—Man. Here's to God's second thought—Woman. Second thoughts are always best, so here's to Woman." It is to the fairest of all God's creations—woman—that I direct your attention and in handling her contributions of life, that we give to her the judicious care that she rightly deserves and is entitled to demand.

Ever since Adam and Eve made love in the Garden of Eden, and Cain and Abel made their advent into an unsympathetic world, the study of obstetrics has merited, but has received the serious attention of far too few of the most scientific medical men. As we compare the wonderful progress in all branches of modern medicine, and preventive medicine, with the conspicuous lack

of obstetrical improvement we are astounded; when, in the twentieth century of our Lord, statistics show that, grouping all women of child-bearing age together, tuberculosis alone is more deadly than childbirth. In 1915, Washington statistics revealed that, among women between the ages of 15 and 45 years, there were 29,200 deaths from tuberculosis, 10,134 from childbirth, of which 4,173 were from puerperal sepsis, and that, leaving out of consideration the ignorant and foreign element and tenement population, among whom tuberculosis is so deadly, the mortality of childbirth took the lead. Statistics of 1914 show that out of 1,000 babies born, 172 died, that out of an annual birth rate of two and one-half million, 250,000, or one in eight, failed to live to age one. We can state graphically that a man 70 has more chance to live to age 71 than a newborn has to live to age 1. Statistics reveal that 30% of the cases of blindness admitted to state institutions have lost the light of day through the lack of proper precautions at the time of birth. Children for whom God has created the world are condemned to perpetual darkness through the negligence of the obstetrician. When the various nervous disorders, as epilepsy, in infants who do survive are caused annually through neglect of proper care of the child, and when through experience of a small group of interested physicians, it is established beyond question that most of these maternal deaths and infant mortality are to a large extent avoidable, is it not appropriate that our attention be directed to an obstetrician's obligation? Henry Van Dyke once said:

*"Four things a man must learn to do
If he would make his record true,
Think without confusion, clearly;
Love his fellow-man, sincerely,
Act with honest motive, purely,
Trust in God and heaven, securely."*

May I, for emphasis, mention four things the obstetrician owes to the expectant mother.

Women have always accepted the mortality and morbidity of childbirth as a sacrifice which they must lay on the altar of motherhood, but since puerperal sepsis has claimed its toll of thousands, over 40% of maternal deaths being due to this cause, it is the very first duty of every physician to give to his patients at least the benefit of an aseptically and anticeptically clean delivery. Delee states that the greatest danger of infection is carried to the confinement room. The physician should be of clean personal habits; should not soil

*Read before DeSoto-Hardee-Highlands County Medical Society, March 11, 1930.

his clothes by contact with post-mortem tables, pus basins, contagious diseases, etc.; he must scrupulously avoid getting infective material on his hands. With sterile gown, sterile hands, sterile instruments, sterile towels, whether in the hospital or home, and with every aseptic precaution, all of which cannot be too strongly emphasized and yet which, in part at least, are all too frequently neglected, one is able to furnish the environment for a clean delivery.

I cannot urge too strongly the practice of making rectal examinations. Such an examination gives just as much information as the vaginal, and with a little practice, is just as easy to do and most important of all, is entirely devoid of transmitting infection. This prevention the obstetrician owes to his patient.

Second: A woman should be robbed of, as nearly as possible, the horror of labor. By the use in the proper indications of morphia, hyoscine, scopolamine, ether, chloroform, nitrous oxide or ether oil rectal anesthesia a state of analgesia can be obtained that will receive the utmost appreciation. Personally, I am a strong advocate of Gwathmey's rectal anesthesia. Particularly is this most satisfactory, in primipara. The new experience for these women with their lack of how and what to do during labor, is mitigated and robbed of its horror by the narcosis produced with rectal analgesia, at the same time continuing the process.

Third: One should anticipate and avoid the toxemias of pregnancy. This can be done through the proper removal of foci of infection, regulation of diet, and judicious care of the kidneys and bowels. One authority has said that foci in teeth are a very great etiological factor in the toxemias of pregnancy. So teeth should receive attention as well as tonsils, etc., in order to remove any source of poisons. Carbohydrate diet is found to be very useful in this connection.

Fourth: By keeping accurate and complete records in each case the obstetrician is able to be in touch with every need and condition of his patients. Blood pressure reading should be recorded and urinalyses made throughout the so-called prenatal period.

Four obligations might also be mentioned for the newborn:

First: Proper care of the eyes. In most states now there is a law which requires the physician to drop 1 to 2 drops of a 1% solution of silver nitrate in each eye of the newborn. In every case this should be done and followed with daily irrigations of boric acid solution. Should the eyes, with this prophylaxis show signs of beginning trouble, without delay appropriate treatment should be begun.

Second: Proper care of the navel. Some authorities advocate cutting the cord short. It seems better, however, to cut the cord about 2 inches from the umbilicus, because in case of secondary bleeding from the cord from too loose a tie, there is room to tie again. The cord should be treated aseptically and if a sterile dressing is placed and an abdominal binder applied and to the cord a few drops of alcohol are dropped through the dressing daily one will seldom encounter infection and rarely is there even temporarily an umbilical hernia.

Third: Outside of Hebrew custom one finds many doctors who insist upon a circumcision or male infants. This is brought to visual splendor when we observe the disappearance of nervous and chorea tendencies by a circumcision and the making of a more cheerful and alert baby.

Fourth: The newborn should have its proper food—mother's milk. In this short space of thought when we think the task is difficult and that maybe in this one case we will be a little careless and possibly get by, I pause to remember and admire the optimism of Edgar Guest in one of his phases:

*"Somebody said it couldn't be done,
But he, with a chuckle replied
That maybe it could and maybe it couldn't
But he would not be one who would say so till
he'd tried;
So he buckled down with a bit of grin
On his face. If he worried he hid it,
He started to sing, as he tackled the thing
That couldn't be done and he did it."*

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SUBARACHNOID BLOCK IN TOXEMIAS OF PREGNANCY

The use of inhalation anesthesia in toxemias of pregnancy always presents a serious problem for the obstetrician. Fetal and maternal mortality are high and further increased with this type of anesthesia. Renal and hepatic insufficiency as evidenced by eclampsia, pyelitis, nephritis and pyelonephritis, the common types seen, are aggravated and made worse when inhalation anesthesia is used.

The administration of neocaine or novocaine by diffusion in subarachnoid block or spinal anesthesia, as it is commonly called, reduces the mortality rate, does not increase the existing toxemia and at the same time renders the patient painless in addition to offering relaxation of the maternal parts seen in no other type of anesthesia. The technique of administering the drug is the same as in subarachnoid block for surgical anesthesia. The dose, except for Caesarian section, is smaller,

however, from one-half to two-thirds. The trend of this type of anesthesia is forward and justly so. In the hands of competent operators it is less dangerous than inhalation anesthesia.

PUBLIC HEALTH PORTFOLIO

At a recent meeting of the American Medical Editors' and Authors' Association, there was much discussion on the necessity of a portfolio of public health in the President's Cabinet. There can be no doubt that public health should be given the recognition by our government that it deserves. When we consider that the expansion of our nation has been largely dependent on the efforts of public health workers, we are more convinced of this necessity. The following resolutions were adopted unanimously by the Association:

WHEREAS, The health of its citizens is our nation's greatest asset; and

WHEREAS, There is now much duplication of effort and division of responsibility in regard to health matters, as now conducted; and

WHEREAS, Labor, commerce, agriculture and other matters of relatively less importance are represented by an officer in the President's Cabinet, while the nation's health is not so represented, although such representation has been recommended by the American Medical Association and endorsed in their platforms, from time to time, by both of the major political parties; and

WHEREAS, It seems reasonably certain that the various health activities now in operation could be more efficiently conducted if coordinated under a responsible head; therefore, be it

Resolved, That the American Medical Editors' and Authors' Association, in convention assembled (at Detroit, Mich., on June 24, 1930), recommends and urges that steps be taken immediately for the creation of a Portfolio of Public Health, in the Cabinet, and that a copy of this resolution be forwarded to the Secretary of State, Washington, D. C., to the secretaries of all National and State Medical Organizations and to all members of this association.

Signed for the association:

H. LYONS HUNT, President,

E. VANDERVOORT, Secretary.

RED CROSS HIGHWAY FIRST AID TO BE EXTENDED AS EMERGENCY MEASURE FOR MOTORISTS

Because of the wide public interest in the Red Cross plan to develop a system of highway first aid stations throughout the United States, under local Red Cross Chapters, it is timely to give here a brief outline of that phase of the plan which particularly affects hospitals and the medical profession.

First, and most important of all, the Red Cross emphatically refrains from encroaching on the respective fields of hospitals or medical men in all its work. The First Aid course, sponsored for many years by the Red Cross, seeks to equip laymen, under competent instruction, to render emergency first aid until the injured can be placed under care of a doctor. In case of serious cuts, fractures, etc., such emergency treatment may frequently be the only means of saving the injured one's life until a doctor can be reached.

Under the plan discussed here volunteer first aid experts will be stationed at highway first aid posts, to render emergency first aid to injured in automobile accidents, which today lead all other causes of accidental death in the United States.

At these first aid posts there will be kept at all times a list of the nearest available doctors and approved hospitals and ambulance services. While the services of the Red Cross personnel will be strictly voluntary, and no remuneration will be permitted, the Red Cross cannot underwrite any necessary further treatment from doctors or in hospitals, this being left to the individual.

In other words, the Red Cross is undertaking a very necessary emergency service to the public, designed to save life and to mitigate suffering, but is confining its assistance to these ends.

It is the newest development of Red Cross peace time service, but is only one of those rendered by the Red Cross, for which the support of a nation-wide enrollment of members is asked each year. Enrollment of Red Cross membership this year will take place from November 11 to 27.

PATRONIZE JOURNAL ADVERTISERS

STATE NEWS ITEMS

Dr. and Mrs. Kenneth A. Morris of Jacksonville announce the arrival of a son, born August 27th at Riverside Hospital. The baby has been named Kenneth Alexander, Jr.

* * *

Dr. J. R. Saunders who was a member of the staff of the Florida State Hospital, Chattahoochee, for several years, is now at Morgantown, N. C., as an assistant physician at the state hospital there.

* * *

Dr. L. W. Martin, formerly of Punta Gorda, is now located at Sebring.

* * *

Dr. and Mrs. F. K. Herpel, West Palm Beach, announce the birth of a daughter, Gretchen, on June 8th at the Good Samaritan Hospital.

* * *

Dr. J. C. Pate of Tampa recently spent about six weeks in the north and east, attending surgical clinics.

* * *

Dr. W. C. Thomas and family of Gainesville are on a visit to the mountains of North Carolina.

* * *

Dr. Buist Litterer of Miami will enter the Skin and Cancer Hospital, New York, October 15th for a year's service as House Physician.

* * *

Dr. J. W. Mitchell of Sebring is now in the W. O. W. Hospital, San Antonio, Texas, convalescing from a recent illness.

* * *

Dr. and Mrs. George A. Dame of Inverness recently spent a vacation in Virginia.

* * *

Dr. W. C. Young and family recently returned to Chiefland from a visit to Atlanta and Chattanooga.

* * *

Dr. T. B. Hall of Miami Beach is at the Post-Graduate School of New York for the summer.

* * *

Dr. Geo. Scott McKnight recently moved from Haines City to Avon Park.

* * *

Dr. E. B. Adkins of Miami Beach is visiting the Mayo Clinic, Rochester, Minn.

* * *

Dr. William D. Lithgow of Miami recently spent a two weeks' vacation with his son and parents in Pennsylvania.

Dr. E. T. Lake of Sulphur Springs returned recently from the Citizens military training camp at Fort Screven, Georgia, where he served as a medical officer.

* * *

Dr. and Mrs. Alvin Stebbins of Punta Gorda have been spending the summer at Decatur, Ga.

* * *

Dr. C. D. Whitaker of Raiford recently spent a vacation visiting at Marianna, Florida, Atlanta and Augusta, Ga.

* * *

Dr. Chas. J. Collins of Orlando, who has been confined to his home for two weeks with la grippe, is able to be back in his office.

* * *

Dr. Theodore G. Croft of Jacksonville spent his vacation last month in training with the 105th Medical Regiment of the 30th Division at Camp Jackson, Columbia, S. C. On August 25th, Dr. Croft was distinctly honored by promotion to the rank of Lieutenant-Colonel.

* * *

Dr. Hewitt Johnston of Orlando is spending his vacation in Birmingham and points in northern Alabama.

* * *

Colonel and Mrs. Rufus Thompson Boozer of West Palm Beach announce the marriage of their niece, Miss Shelly Nadine Haddock, Jacksonville, to Dr. Oliver Pickering Broadbent, August 5th, at St. Augustine. Dr. and Mrs. Broadbent left immediately following the ceremony for a two weeks' trip in the north.

* * *

Dr. and Mrs. C. E. Tumlin of Miami are spending their vacation at Waynesville, N. C.

* * *

The United States Civil Service Commission announces the following open competitive examinations: Senior Medical Officer (Pathology), \$4,600 to \$5,400 a year; Associate Medical Officer (Pathology), \$3,200 to \$3,800 a year. Applications for senior and associate medical officer (Pathology) must be on file with the Civil Service Commission at Washington, D. C., not later than September 24, 1930.

* * *

At the recent meeting of the American Association for the Study of Goiter at Seattle, Washington, Dr. William F. Rienhoff, Jr., of Johns Hopkins University, Baltimore, Maryland, received the annual award of \$300 for the best essay dealing with the goiter problem. Drs. O. P. Kim-

ball of Cleveland, Ohio, and E. P. and D. R. McCullagh, Cleveland Clinic Foundation, Cleveland, Ohio, and Robert P. Ball, of the University of Louisville, received honorable mention.

* * *

Dr. J. R. McCord of the U. S. Department of Labor, gave a course of lectures on obstetrics to the members of the Hillsboro County Medical Society, July 14th to 17th, inclusive.

* * *

Dr. A. T. Eide, formerly of Haines City, now located at Lake Placid, is organizing an American Legion Post at Lake Placid.

* * *

Dr. W. S. Manning of Jacksonville who ranks as major, recently spent two weeks in training with the 105th Medical Regiment of the 30th Division at Camp Jackson, Columbia, S. C.

* * *

Dr. A. T. Summers, eye, ear, nose and throat specialist of Miami, recently removed from that city to his native state of Illinois.

* * *

Dr. Wilburn C. Young, formerly of Starke, has removed his office to Waldo, where he has taken over Dr. Pridgen's practice. Dr. Pridgen is at the present time connected with the United States Veteran's Bureau Hospital at Lake City.

* * *

Dr. H. B. Haisfield, formerly of Miami, is now associated with Dr. A. R. Haisfield at Pensacola. He has just completed a year's study at the University of Pennsylvania and is limiting his practice to urology.

* * *

Dr. C. A. Clemmer of Daytona Beach was married to Miss Grace Newcombe at McIntosh, July 14th. Dr. and Mrs. Clemmer left immediately following their marriage for a trip to Georgia, Tennessee, Virginia, Niagara Falls and Quebec. They will return home about October 1st.

* * *

Dr. L. L. Andrews of Orlando has returned from an extended trip in the west.

* * *

Dr. C. H. Farmer of Lakeland, who has recently been a member of the house staff of the St. Louis Children's Hospital under Dr. McKim Marriott is now acting as assistant to Dr. D. Lesesne Smith at the Infants' and Children's Sanitarium at Saluda, N. C.

* * *

The Interstate Post Graduate Medical Association of North America will hold an international

meeting at Minneapolis, October 20th to the 24th, inclusive. A program of the meeting may be had by addressing Dr. W. B. Peck, Freeport, Illinois.

* * *

Dr. J. Knox Simpson and Dr. C. R. Wilcox of Jacksonville recently returned from a vacation spent in the mountains of North Carolina.

* * *

Dr. Leigh F. Robinson of Ft. Lauderdale is spending some time in the north. He will visit Mayo Clinic at Rochester, Minn.

* * *

Dr. and Mrs. E. W. Veal of South Jacksonville recently spent a few days in Macon, Georgia, with the former's parents. They also visited points in North Carolina.

* * *

Dr. John E. Boyd of Jacksonville expects to develop a clinic at the Duval County Hospital devoted exclusively to goiter cases.

* * *

Dr. E. T. Craney of Orlando has gone to Pennsylvania for a stay of several months.

* * *

Dr. George E. W. Hardy of Tampa recently spent some time at Camp Jackson, South Carolina, as surgeon of the 116th Field Artillery. At the conclusion of his military work, Dr. Hardy motored to Baltimore where he attended clinics at Johns Hopkins.

* * *

Dr. Maurice Heck of Miami is spending his vacation at Bushkill, Pennsylvania.

* * *

Dr. O. C. Brown of Ft. Lauderdale is spending the summer in the states of Illinois and Wisconsin.

* * *

Dr. Roland Hotard and family have returned from a several weeks' stay in Biloxi, Mississippi.

* * *

Dr. I. M. Hay and family of Melbourne have recently returned from a motor tour of Colorado and Arizona.

* * *

Dr. Harry Dash Johnson of Orlando was recently appointed surgeon on the staff of the Morrison Hospital, White Mountains, New Hampshire.

* * *

Dr. Clayton D. Washburn of Jacksonville has returned from a trip to points in the north and east. Dr. Washburn spent some time at his summer home on the Susquehanna River near Binghampton, New York, visited Washington and also

Philadelphia where he spent considerable time at the New Extension University Laboratory.

* * *

Dr. C. E. Coffin and family of Winter Park recently spent some time at their summer home, "Chestnut Lodge", at Bat Cave, N. C.

* * *

Dr. F. W. Foxworthy of Miami Beach is spending the summer doing special work at the Heart Clinic of Bellevue Hospital, New York.

* * *

Dr. W. H. Y. Smith, formerly of the health department of Tampa, has been named as the health officer for the Taylor county unit, the first county-wide organization to be approved under the 1930 program. The unit began to function September 1. The sanitary officer for the unit will be W. C. Folsom of Lakeland, a graduate of the Massachusetts Institute of Technology.

* * *

Dr. R. F. McLeod of Madison recently moved to South Jacksonville where he opened offices in the Masonic Building.

JAMES F. MILLER

Dr. James F. Miller of Inverness died July 25th, death being due to chronic nephritis. He was buried at Inverness the following day. Honorary pallbearers were: Drs. A. C. Coogler, G. R. Creekmore, George Dame and L. H. Dame of Inverness and Drs. A. B. Cannon and T. F. Jackson of Dade City.

J. C. INMAN, JR.

Dr. J. C. Inman, Jr., for more than four years a member of the staff of the state hospital for the insane at Chattahoochee, died August 9th from a gunshot wound. His body was found by a maid on the grounds of the hospital from which he was moving following his recent marriage. A shotgun lay beside the body. Dr. Inman was a native of Gadsden County and was about 28 years of age.

HIRAM BYRD

Dr. Hiram Byrd, formerly a practitioner of Bradenton and Tampa, died from a heart attack on Sunday afternoon, July 20th, at Detroit, Michigan. Dr. Byrd, for a number of years, was connected with the State Board of Health as scientific secretary. During the past twelve years he had been engaged in private practice at Ocala, Bradenton and Tampa.

LYDIA WOERNER

Dr. Lydia Woerner of Interlachen died at her home on July 3rd, at the age of 69 years. Following her graduation from the Woman's Medical College of Pennsylvania in 1899, Dr. Woerner, whose father, Rev. F. G. Woerner, was very well known in Lutheran circles, sailed for India. She gave unstinted service as a medical missionary until 1912 when she was forced to give up her work because of poor health caused from an infection contracted in the course of her administrations. While in India, Dr. Woerner founded the Hospital of Rajahmundry and before she left for the States, the King of England decorated her for unexcelled services rendered to the natives of that country. She was the second American woman to receive this high award. Dr. Woerner came to Interlachen in January, 1913, in broken health but after a year's time she was able to take the state medical examination. For sixteen years she ministered to the ills of the surrounding people. On October 15th, 1925, the Lutheran Woman's League gave two \$5,000.00 scholarships to the Woman's Medical College of Philadelphia, which were named in honor of Dr. Anna Kugler and Dr. Lydia Woerner. A tablet will be placed in their honor in the Woman's Medical College. Dr. Woerner was stricken last November and from that time on was confined to her bed. She is survived by two brothers and three sisters.

The Florida East Coast Medical Association will meet at Melbourne, October 2nd and 3rd. The Brevard County Medical Society is to act as host on that occasion. Dr. I. M. Hay of Melbourne has been named chairman of the local committee on arrangements and will be assisted by Dr. W. J. Creel of Eau Gallie and Dr. G. W. Wood of Rockledge. Dr. I. F. Bean of Melbourne is chairman of the committee on registration and housing. With him on this committee are Dr. J. R. Rose of Titusville and Dr. W. J. Creel of Eau Gallie. Dr. I. K. Hicks of Melbourne is chairman of the committee on entertainment. Other members of this committee are Dr. E. W. Potthoff of Titusville and Dr. T. C. Kenaston of Cocoa. Everything points to a most interesting program at this meeting and a full report of the occasion will appear in the October Journal.

THE WOMAN'S AUXILIARY PAGE

WOMAN'S AUXILIARY
TO THE
FLORIDA MEDICAL ASSOCIATION, INC.

State Editor
MRS. EDWARD JELKS,
2244 St. Johns Avenue
Jacksonville

OFFICERS

MRS. J. RALSTON WELLS, President	Daytona Beach
MRS. S. E. DRISKELL, President-elect	Jacksonville
MRS. W. G. POST, JR., Vice-President	St. Petersburg
MRS. J. M. IRWIN, Historian	St. Augustine
MRS. J. E. TAYLOR, Secy.-Treas.	DeLand

On the Auxiliary's page of the August Journal, following Mrs. Wells' splendid report of the meeting of the Auxiliary to the American Medical Association, Detroit, June 23-27, was given a list of the officers for 1930-31.

Below is given a list of the chairmen of standing committees and also a copy of the resolutions which were adopted at this meeting.

CHAIRMEN OF STANDING COMMITTEES

Organization—Mrs. Southgate Leigh, Norfolk, Va.

Program—Mrs. E. V. DePew, 115 East Agarita Ave., San Antonio, Texas.

Hygeia—Mrs. R. N. Herbert, 1509 Stratton Ave., Nashville, Tenn.

Press and Publicity—Mrs. John O. McReynolds, Maple Terrace, Dallas, Texas.

Legislation—Mrs. Elmer L. Whitney, 18224 Wildmere, Detroit.

Finance—Mrs. T. O. Freeman, 1204 Wabash Ave., Mattoon, Ill.

Revisions—Mrs. W. Wayne Babcock, 1720 Spruce St., Philadelphia.

Printing—Mrs. Edgar E. Buyers, DeKalb St., Norristown, Pa.

Social—Mrs. Walter Jackson Freeman, 1507 Spruce St., Philadelphia.

RESOLUTIONS

1. *Resolved*, That all State Treasurers be instructed to pay their national dues on the last day

of the fiscal year of their respective State Auxiliaries.

2. *Resolved*, That in future new State Auxiliaries pay an initiation fee of \$5.00 in order to obtain representation at their first national convention, thereafter paying full dues at the close of their fiscal years, as heretofore provided.

3. *Whereas*, The study envelopes have been enthusiastically commended by the Advisory Council of the American Medical Association and whereas those State Auxiliaries which have used them have found them of great value, be it resolved that their use be continued and that all State and County Auxiliaries be urged to appoint Study Program Chairmen, and that these chairmen get in touch immediately with all Presidents and Presidents-elect of State and County Auxiliaries in order to secure the full advantage of their use as program material.

4. *Be it resolved*, That the Hygeia Committee be instructed to leave to the discretion of local Auxiliaries the advisability of soliciting individual subscriptions, but that we continue to push Hygeia as an instrument of health education by realizing funds from benefit entertainments or otherwise and by applying those funds to the purchase of subscriptions to be presented to teachers, libraries, legislators and other groups; and that we continue to acquaint other women's organizations, leaders of youth, superintendents of schools, etc., with the magazine.

5. *Whereas*, The Auxiliary Primer issued by the Medical Society of the State of New Jersey is the most comprehensive presentation of the aims and objectives of this organization containing as well quotations from eminent members of both the Medical Society and the Woman's Auxiliary regarding the need for a Woman's organization, be it resolved that the wide use and distribution of the Primer be strongly recommended throughout our entire membership.

6. *Whereas*, Parent-Teacher Associations, Federated Clubs, the League of Women Voters and the Auxiliary to the American Legion and other similar organizations are influential in their various civic and educational capacities, be it re-

(Continued on page 138)

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solved that the Auxiliary to the American Medical Association urge upon its component state auxiliaries the advisability of participation through individual membership in the various activities of the aforementioned organizations with a special view (1) to the promotion of their health programs and (2) to cooperation in the public health projects of their Boards of Health.

7. *Whereas*, The annual meeting of the Woman's Auxiliary to the American Medical Association is always a great inspiration and stimulation to those in attendance, be it resolved that the component State Auxiliaries be urged to make possible the attendance of their Presidents or Presidents-elect by payment of all or part of their expenses.

HYGEIA

The Woman's Auxiliary to the Florida Medical Association was honored in having its Chairman of Hygeia, Mrs. Herrman H. Harris, of Jacksonville, appointed a member of the National Hygeia Committee. Mrs. Harris has rendered the Florida organization most enthusiastic and excellent service and is indeed worthy of this honor. Please send all subscriptions to, or renewals of this magazine through Mrs. Harris.

NEWS NOTES

Mrs. William B. Clark of Ocala spent the month of August at Montreat, N. C., with her mother, Mrs. A. S. Carr, of Bainbridge and Savannah, Ga.

* * *

Mrs. T. H. Wallis of Ocala was the guest of Mrs. H. L. Borland, at Daytona Beach, for the month of August.

* * *

During the last two weeks of August, Dr. and Mrs. J. R. Wells and family, of Daytona Beach, enjoyed a trip to Cuba and the Florida Keys.

* * *

As President of the Woman's Auxiliary to the Florida Medical Association, Mrs. J. Ralston Wells, on August 12, attended a conference in Gainesville, which Dr. Blachly, Director of the Bureau of Child Hygiene and Public Health Nursing, State Board of Health, had called with the heads of all women's organizations in the State. At this meeting, Dr. Blachly outlined her program for the year and each one present had the opportunity of talking over with her the plans of their respective organizations. Mrs. Wells reported a most interesting meeting.



COME ON DOCTOR!

it's Louisville this Year!

24th Annual Meeting

SOUTHERN MEDICAL ASSOCIATION

Louisville, Ky. Nov. 11th-14th 1930

MEDICINE and SURGERY in every phase will be covered in the general and clinical sessions and the eighteen sections and conjoint meetings making up the program for the Louisville meeting—modern scientific and practical medicine and surgery brought right down to NOW. Louisville, "At the Crossroads of the Nation," November 11-14, 1930.

ARE you a member of the Southern Medical Association? Every physician in the South who is a member of his state and county medical societies can be and should be a member. The annual dues of \$4.00 include the Association's own Journal each month, the Southern Medical Journal—the equal of any, better than many. "The best investment of the year," writes a prominent physician of the South. You will **EVENTUALLY** make that best investment—why not **NOW**?

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OF the South, FOR the South.**

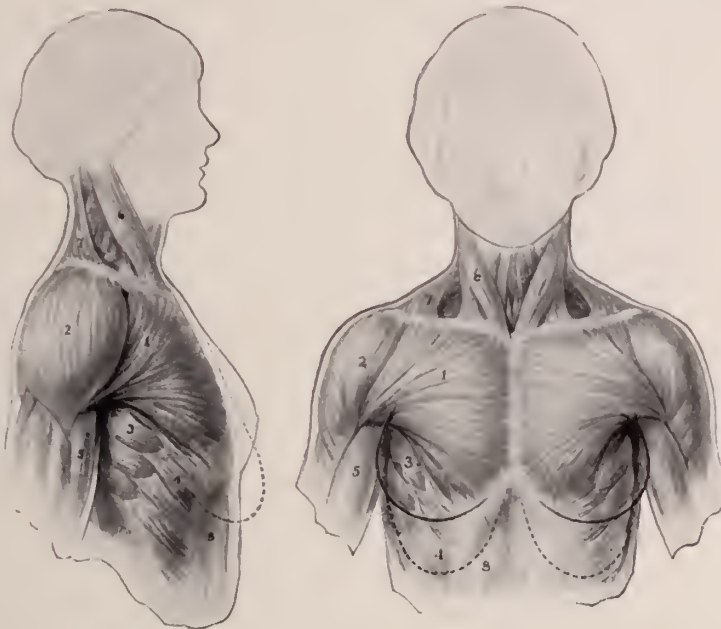
ANATOMICAL STUDIES

*for the
Practitioner*

(Solid lines indicate the normal breast, dotted lines the sagging or pendant breast.)

1—Pectoralis major. 2—Deltoid. 3—Serratus anterior. 4—Obliquus externus abdominis. 5—Biceps. 6—Sternomastoid. 7—Trapezius. 8—Rectus abdominis.

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Anterior View

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TUBERCULOSIS ABSTRACTS

A REVIEW FOR PHYSICIANS

ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

ROBERT KOCH in 1884 raised hopes that tuberculin would prove to be a specific cure for tuberculosis. His failure did not discourage but rather spurred on numerous other brilliant workers. A half-century of futile search has considerably dampened the hope that a single genius will solve the riddle. There is, however, promise of a solution in the joint effort of many minds. Such an effort is being made by the Committee on Medical Research of the National Tuberculosis Association, which, since 1921, has been working systematically on anatomical, pathological epidemiological studies, and particularly on an analytic study of the tubercle bacillus itself. When the composition, nature, and physiology of the bacillus, as well as the body cells involved in the disease, are fully understood, it is not only possible but probable that a simple means will be found to cure and prevent tuberculosis. Kendall Emerson has given a resume of the work and findings of this committee in the Journal of the American Medical Association, March 15, 1930, from which the following synopsis is derived.

RESEARCH IN TUBERCULOSIS

Research in the chemistry and biology of the living tubercle bacillus required far more in equipment and personnel than could be found in any single laboratory. There were, however, numerous individuals equipped to carry on highly specialized and technical research. The Committee on Medical Research, organized in 1921, succeeded in interesting a considerable number of specialists in attacking the study under a co-operative plan. Twenty-one different laboratories are now so correlated, and workers of these laboratories meet in frequent conferences under the leadership of the chairman of the committee.

MATERIALS STANDARDIZED

In order to make the results in different localities comparable, it was essential first to standardize all products. Esmond R. Long of the University of Chicago produced a synthetic medium composed of chemically pure ingredients of ex-

(Continued on page 142)

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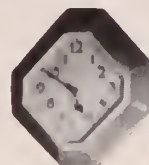
FOR THE TREATMENT OF
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ALCOHOLISM, MENTAL AND

NERVOUS DISEASES

LOCATED IN THE EASTERN SUBURBS OF THE CITY. SIXTEEN ACRES OF BEAUTIFUL GROUNDS. ALL EQUIPMENT FOR CARE OF PATIENTS ADMITTED.

make Nourishing Foods *taste better with this*



THIS is one of the advertisements of The Sugar Institute, appearing in newspapers throughout the country. In order to keep the statements in accord with modern medical practice, they have been submitted to and approved by some of the leading authorities in the field of human nutrition in the United States.



New Seasoning

THE OLD PROVERB SAYS, "Hunger is a good sauce." But what is to be done when there is no appetite or hunger for the foods we should eat?

There is no seasoning more unusual than a combination of sugar and salt in giving familiar foods a new and appetizing flavor. Just taste a pinch of salt and a dash of sugar mixed together and you'll realize what a full-bodied goodness they make.

Then, try such a mixture of salt and sugar in cooking vegetables. In peas, tomatoes, carrots, spinach and cabbage, a level teaspoonful is enough, but suit your taste.

Put it in soups, stews, or cereals as they cook. You'll be surprised to learn that the sugar not only blends deliciously with the flavor of the dish, but emphasizes it.

The most popular mixture to use and keep on hand is equal parts of sugar and salt. You may prefer one part sugar with two parts salt.

Doctors and dieticians recommend the use of sugar as a flavor. Not only does the sugar promote the necessary flow of gastric juices but it is quickly converted into energy. The Sugar Institute, 129 Front Street, New York.



"Good food promotes good health"

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actly known quantities and qualities for the growth of the bacteria. As no laboratory was equipped to grow the bacteria in quantities sufficient for the desired analyses, two manufacturers, the H. K. Mulford Company and Parke, Davis and Company, generously undertook to grow and supply such raw materials. Both the bacteria and the synthetic media in which they are grown are subjected to research, the latter to determine the chemical changes occurring as the result of the metabolism of the bacteria. Up to the present time, five varieties of bacilli have been produced and subjected to analysis—human tubercle bacillus H-37, the bovine, the avian, non-specific timothy grass, and lepra bacilli. After filtration, the

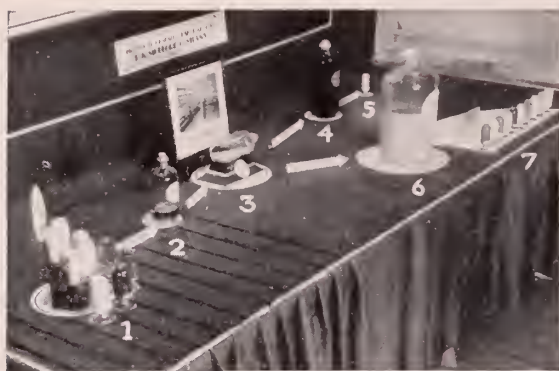


Exhibit illustrating fractioning of tubercle bacillus

1. Ingredients of Long's media
2. Long's media
3. Tubercle bacillus culture on Long's media
4. Bacterial filtrate
5. Protein 304-F precipitated from filtrate
6. Bacteria precipitate (tubercle bacilli)
7. Pure chemical products derived from bacteria

Courtesy H. K. Mulford Co.

bacteria are shipped to Sterling Chemical Laboratory at Yale University and the filtrate to the Department of Pathology of the University of Chicago.

BACILLUS IS FRACTIONED

Under the direction of Treat B. Johnson of Sterling Laboratory, the bacterial residue is broken up into isolated fractions, or pure substances, some of which were hitherto unknown to chemistry. Similarly, at the University of Chicago, the filtrate, or medium, is subjected to chemical disintegration. These several fractions are then sent to the Rockefeller Institute, where, under the direction of Florence R. Sabin, they are tested out individually on animals for their physi-

(Continued on page 144)

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For Invalids, Mental, Nervous and
Addict Patients

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*Any one can make belts, but belts which
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may do serious injury*

"STORM"

The New
"Type N"
STORM
Supporter



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and patients. Long
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hips. Hose sup-
porters attached.

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Adapted for ptosis, hernia, pregnancy, obesity,
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between "the man on the street" and the physician in his office

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Facts which the public should know about some of the common but perplexing affections requiring a physician's skill for their treatment—conditions such as cancer, anemia, obesity, rheumatism—are the subjects of current advertisements which are appearing over the signature of Parke, Davis & Company in such magazines

as the *Saturday Evening Post*, the *Literary Digest*, *Hygeia*, *Time*, and *Collier's*.

By publishing authentic, non-technical information about such diseases, and by proving how *intricate* these diseases are, we are endeavoring to show people *why* they should go to their doctor for consultation and treatment.

It is our sincere belief that this unique campaign of advertising, which has been running uninterruptedly for the past two years, is helping, in a measure, to bridge the gap between the man and the woman on the street and the physician in his office.

Copies of the full-page advertisements which are pictured above will be gladly sent you if you will drop a line to our Detroit laboratories.

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ological effects. At the same time, a clinical study is made of the fractions by David R. Lyman of Gaylord Farm Sanatorium.

Thus far, there has been isolated from the bacteria and from the medium on which they were grown a pure protein substance which produces the skin reaction typical of tuberculin. It has also been shown that a certain fat fraction stimulates the growth of the monocyte (the cell in which the tubercle bacillus grows and is conveyed) far beyond the rate of growth of other cells. It has further been demonstrated that the sugar fractions or polysaccharides of the tubercle bacillus are chiefly responsible for the fever and rapid pulse and that they possess a killing power for tuberculous animals. It appears also that it is the polysaccharides which determine the distinctions between the human, bovine, and avian types of tubercle bacillus. The task of testing and classifying the biologic effects of all the types of bacillus is still in its early stages.

CHEMISTRY OF BODY CELLS

The changes in living cells brought about by the action of the tubercle bacillus are being studied by R. S. Cunningham at Vanderbilt University. The fact that tuberculosis is finally a problem of the living chemistry of the tubercle bacillus in symbiotic existence with the living chemistry of body cells has led to this attempt to study the influences of various substances on the several types of cells composing the body. Supplementing Dr. Cunningham's work, Eugene F. DuBois and Paul Reznikoff of Cornell University are making a comparative record of the respiration rate of the living tubercle bacilli and of body cells, both before and after infection with tubercle bacillus. (Comment: If, for example, a means could be found for disturbing or disrupting the synchronism of the respiration rate of the tubercle bacillus and the monocyte, which is the host of the bacillus, the bacillus would probably perish before it had been conveyed to the soil on which its growth is possible.)

Ross G. Harrison and George A. Baitsell of Yale University are carrying on a study of scar tissue production, which is so important a factor in tubercle production. "It would now appear," they report, "that the finer chemistry of the development of the fibrils in the ground substances and fluids of the body has many points in com-

(Continued on page 146)



Brawner's Sanitarium


ATLANTA, GEORGIA

A modern neuropsychiatric hospital with special laboratory facilities for the study and treatment of early cases. Also a department for the treatment of drug and alcoholic addictions.

The Sanitarium is located on the Marietta Electric Car Line, ten miles from the center of Atlanta, near Smyrna, Ga. The grounds comprise 80 acres. The buildings are steam heated, electrically lighted, and many rooms have private baths.

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DR. JAS. N. BRAWNER, Medical Director.
DR. ALBERT F. BRAWNER, Resident Physician.



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City



Not one need die --- Not one need suffer

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L. Van Es at the University of Nebraska Agricultural College is studying the distribution of avian tuberculous infection in mammals other than swine.

Ernest L. Walker of the University of California investigated the therapeutic value of chaul-

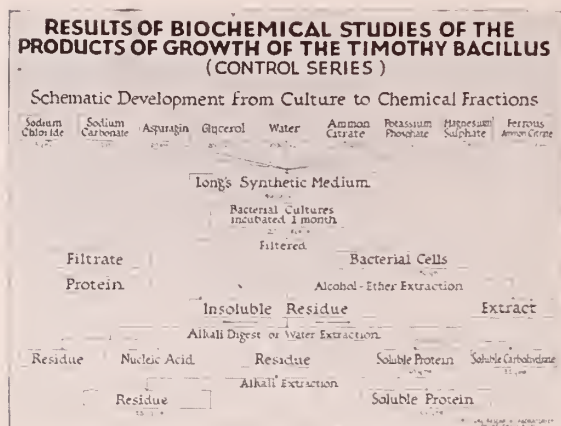


Chart illustrating fractioning of timothy bacillus (control series)

—Courtesy Parke, Davis & Co.

moogra oil, which study was discontinued when it was proved that this remedy, so potent in leprosy, has no effect on tuberculosis.

In his conclusions, the author states: "The work, although now pursued for a number of years, may still be considered to be in its infancy. Whither it leads, it would be idle to speculate. I believe it is no breach of confidence to say that in a recent statement to me Dr. Sabin remarked that she did not know when she had been so deeply thrilled as by the possibilities of this extensive study and the results toward which it might be leading."—*Research in Tuberculosis, Kendall Emerson, M.D., Jour. of the A. M. A., March 15, 1930, Vol. 94.*

(This review secured by the Florida Public Health Association from the National Tuberculosis Association).

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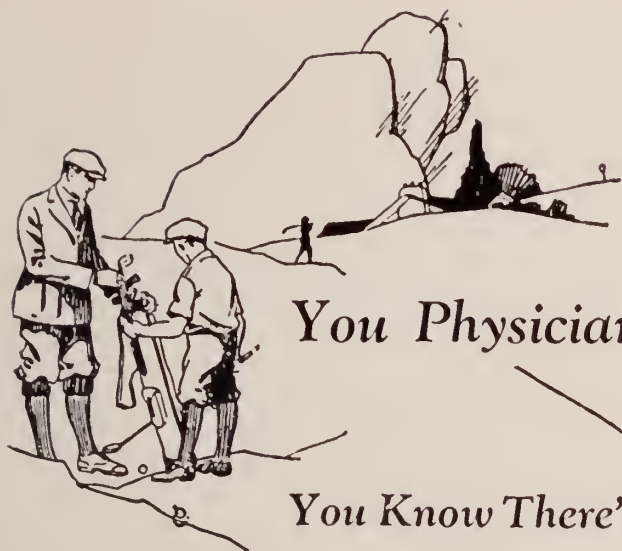
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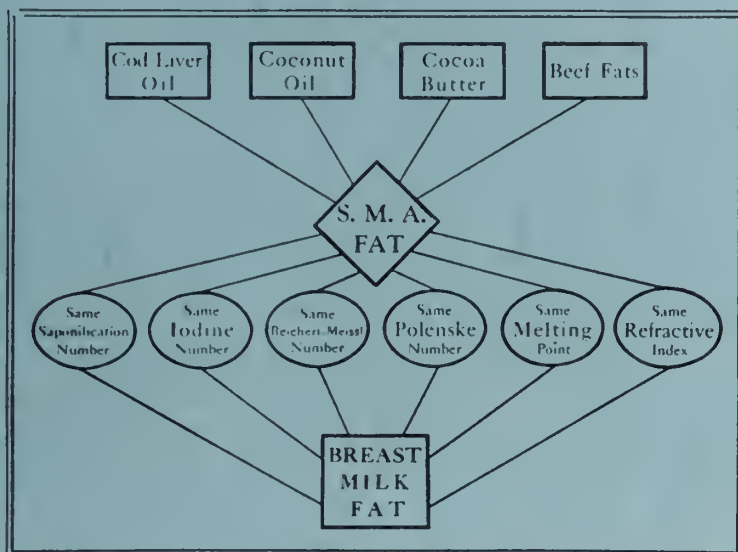
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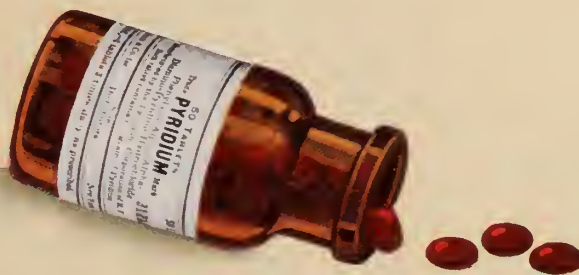
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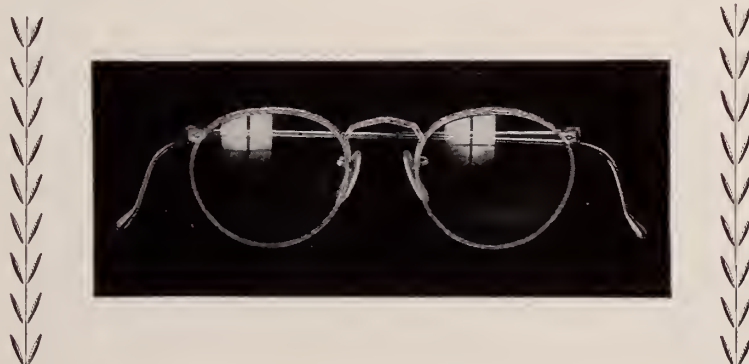
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PUBLISHED MONTHLY

Volume XVII

Jacksonville, Florida, October, 1930

Number 4

FREE TENDON GRAFTS IN THE FINGERS—REPORT OF CASE*

KENNETH A. MORRIS, M.D.,
Jacksonville.

A close study of the anatomy of the hand will reveal a marvelous mechanism of tendons, joints and ligaments which act as pulleys. It will be noticed that these tendons glide with remarkable ease through tissues, under pulleys and over joints. This gliding mechanism, the most important requisite for successful tendon grafting, was first explained by Biesalski and Leo Mayer.¹ Mayer found that "the tendon sheath was merely one element in the gliding mechanism and that the range of motion above the sheath was fully as great as within the sheath." Tendon sheaths act to lessen friction around a corner, but the ability of the tendon to glide through tissue in the

straight part of its course, where no sheath is present, is made possible by a loose areolar tissue, the paratenon. It is this fatty elastic tissue which must be preserved when a tendon is grafted.

If a tendon has been gutted by a previous infection or injured beyond repair and nothing remains but a mass of scar tissue, it should be removed and a new one grafted in its place. Whole parts of such a tendon will have sloughed away



FIG. 2

Diagram showing normal relations of annular ligaments or pulleys to flexor tendons. A—Phalangeal annular ligaments. B—Transverse metacarpal ligament. (Nelson's Surgery.)



FIG. 1

Normal relation of flexor tendons of hand showing phalangeal annular ligaments (ligamenta vaginalia). Black shows length of flexor tendons involved in case reported. (Sabotta-McMurrich Anatomy.)

and its muscle will be so contracted that it will be impossible to suture the ends at the proper tension.

Sterling Bunnell,²⁻³⁻⁶ who has probably repaired more crippled hands than any man in the world, has formulated certain principles for tendon grafting. The most important of these is the restoration of the gliding mechanism already referred to. Free tendon grafts with paratenon tissue may be obtained from the palmaris longus in the forearm or from one of the extensor tendons of the toes. Small pieces of these tendons may be used to replace pulleys. Pulleys are ligaments which hold a tendon in its path close to the bone. If they are not replaced or repaired the tendon will be displaced forward like a bowstring when the finger is flexed. (Figs. 1 and 2.)

The site of the incision is most important and in the fingers it should be mid-lateral between the two lateral arteries. The old mid-longitudinal incision crosses flexion creases at right angles and causes contractures and binding adhesions along the tendon. Bunnell is very emphatic about the dangerous effect of the mid-longitudinal inci-

*Read before the 57th Annual Meeting of the Florida Medical Association, Pensacola, May 6, 7, 1930.

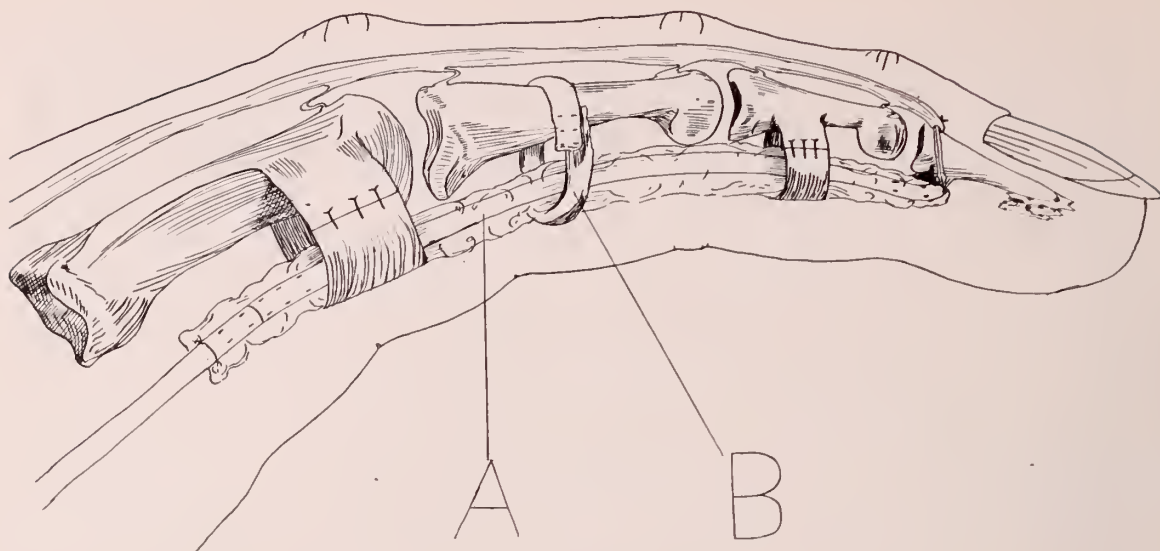


FIG. 3

Diagram of reconstructive operation. A—Free tendon graft replacing destroyed flexor tendons. B—Free tendon graft used to replace proximal phalangeal ligament. (Modified from Bunnell; *J. of Bone and Joint Surg.*, Vol. X, No. 1, January, 1928.)

sion which cuts pulleys and causes deformity. It should not be used in repair work or to drain pus from a tendon sheath.

With regard to technic, it should be as atraumatic as possible. Constant sponging and rough manipulation cause more scar tissue to form and give poor results. All dissection should be done in a bloodless field. This may be obtained with an Esmarch's bandage and a tourniquet. Little sponging will be necessary and blood vessels, nerves and other delicate structures will be plainly visible. As much scar tissue as possible should be removed by block dissection before a tendon is placed in its new bed. Tendons should be sutured with fine silk spliced into each end for the distance of about one inch and the knots should be buried between the two ends. In order that the proper tension may be obtained, the principle for uniting tendons as determined by Mayer¹ should be followed. "When the origin and insertion of a muscle are approximated as close together as possible, the tension of the tendon should be zero." However, a muscle whose tendon has been severed a long time will be found to be contracted and a little longer graft will be necessary.⁴

Before any repair work is attempted, the question of free motion in the joints should be considered, for it is useless to replace tendons in a finger with stiff joints. Such joints may be mobilized by steady elastic traction with some type of banjo splint.

After-care is important. If the muscles of the

repaired tendon are placed in the position of greatest relaxation, motion may be started the day following the operation. Exercise must be persistent, for adhesions are slow to give way and it may take a year for satisfactory results to be obtained.

The following case of tendon grafting in a finger, while not an unusual procedure in itself, is reported because of the unique physical disability that was present:

REPORT OF CASE

F. B., a young man aged 19, was admitted to St. Luke's Hospital December 5th, 1929. His only complaint was that he could not flex his right index finger. He stated that he was an orphan without means of support for the future and wished to enter the army. He had, however, just been turned down by the army medical examiner because he could not pull the trigger of a gun with his right index finger. His past history brought out the fact that he had had a severe infection of that finger nine years previously and his disability dated from that time.

Physical examination showed the two distal phalanges flexed about 10 degrees from the horizontal. Fortunately, all the joints were freely movable. He could flex the proximal phalanx fairly well due to the action of the lumbricale and interosseous muscles, but he could not to the slightest degree flex the middle or the distal phalanx, separately or together. No scars were visible on the surface, but the flexor tendons could

be felt as a hard mass of scar tissue along the palmar surface of the finger.

The first stage of a reconstructive operation was done under ether anesthesia December 6th, 1929. A mid-lateral incision was made over the right index finger and an L-shaped incision in the palm. Both the flexor digitorum sublimis and the flexor digitorum profundus tendons were found to be a mass of scar tissue with the two distal pulleys or annular ligaments destroyed. Opposite the proximal phalanx about an inch of the tendon had sloughed away. The transverse metacarpal ligament was intact and normal tendon was found about the middle of the palm. Because of the time consumed, the wound was closed and a second stage done December 14th, 1929. The scarred flexor tendons and surrounding scar tissue were removed. A piece of the palmaris longus tendon 10 cms. long was removed from the forearm. One end was sutured to the flexor digitorum profundus tendon in the palm. The other end was attached to the distal phalanx by silk sutures passed through a drill hole in the bone. Another section of the palmaris longus tendon was wrapped around the proximal phalanx and the tendon to form a pulley. (Fig. 3.) The metacarpal ligament was repaired with 00 chromic catgut and the wound closed with interrupted dermal sutures. Exercise was commenced the day following the operation. The wrist was held in acute flexion for one month. All induration had disappeared in six weeks and today, five months following the operation, the patient can flex the middle and distal phalanges about 80 degrees. (Fig. 4.) He is now able to hold a pen firmly between this finger and thumb

when writing and he can pull the trigger of an army rifle and automatic pistol.

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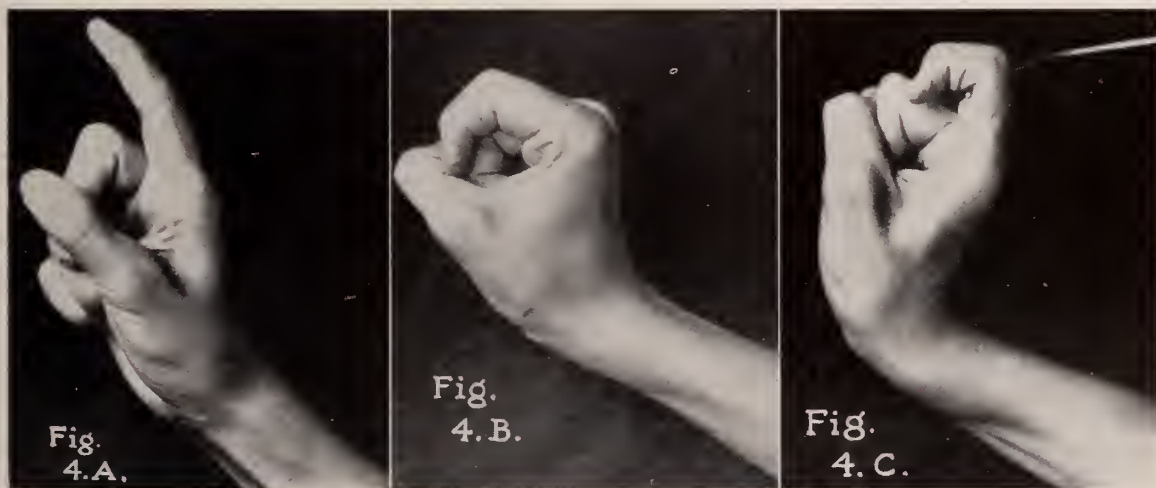
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DISCUSSION

Dr. Edward Jelks, Jacksonville:

A sore or stiff finger is serious to the man who has it. I think Doctor Morris is very wise in bringing to our attention this subject. We all have to treat infected fingers from the beginning of the infection to the ultimate result. Therefore, we are familiar with what he had to deal with in trying to get a good finger out of one which was crippled.

There are one or two points I would like to mention which, if observed, are helpful in preventing sloughing of tendons or, should the tendons slough, are helpful in making a plastic operation more successful. The first point is that of drainage. Sometimes we treat infected fingers by applying a wet dressing with the hope that the infection will clear up. Usually it will. But we should remember, as Doctor Morris urges, that if we use early lateral incision extending down into the area of infection, sloughing of the tendon will rarely take place. Another point of impor-



Photographs showing amount of flexion restored five months following operation. Fig. 4.A. Right index finger extended. Fig. 4.B. Voluntary flexion. Fig. 4.C. Voluntary flexion with proximal phalanx supported.

tance with reference to drainage is that it is wise when there is swelling or redness at the base of the finger to make an incision into this. Pus may not be obtained, but incising the area of induration relieves some of the constricting pressure about the base which is interfering with the blood supply of the finger.

It is most important in treating these infected fingers to preserve motion, since a reconstruction operation is contra-indicated in presence of a stiff joint. Frequently, we put a splint on a finger when it is infected. The patient himself will hold the finger stiff if you do not urge him to move it. It is best to begin early the use of heat and passive movement. This is important in preserving motion. Remembering that some fingers will get stiff in spite of all that can be done, they should be held constantly in the position of election. Be slow in keeping infected fingers splinted at all and never completely extended.

I want to congratulate Doctor Morris on his admirable presentation of a good piece of work. He has brought out some very important principles for dealing with infections of the fingers.

Dr. W. W. Massey, Quincy:

This paper is probably of more interest to me than any other man here, for the simple reason that I have just gone through with an infection of right hand, beginning in the index finger. The finger is gone, I do not regret it, but it might have been saved. I did not have it removed until the infection had cleared up and was advised by some of the best men in the country that I would have a more useful hand without the finger. If I had known of Dr. Morris' work I would have given him a chance on my case, since we do not like to lose fingers.

I had practically the same condition as he reports, that is, the loss of the flexor tendon and involvement of the capsules around the joints. The infection started from a needle prick in finger while doing a pus case. About thirty-six hours after I got this prick, with no bleeding at the time, it got hard where the needle went in. I had a severe infection and was knocked out for three months. Lost about 60 to 65 pounds. A great effort was made to confine the infection to index finger by free drainage. However, the capsules of all joints in hand were more or less involved and the hand and fingers were very stiff and useless. After eight months' effort all joints responded except the index finger to some extent,

and it was then that I had the finger removed. Upon dissecting the finger, after its removal, no extensor or flexor tendons were found.

I just want to give you this warning, especially to the men doing surgery: You better watch out, or some little bug might get you.

Dr. Kenneth Morris, Jacksonville (concluding):

I want to thank Doctors Jelks and Massey for their discussions.

RATIONAL X-RAY AND RADIUM THERAPY*

WALTER A. WEED, M.D.,
Lakeland.

In a word of explanation, I should like to say that this paper is in no way an attempt at a scientific dissertation on the therapeutics of radiant energy. I wish merely to bring to you some of the conclusions drawn and convictions deduced from my own observation and experience during the past sixteen years, which I hope may be of some value in clarifying some of the misunderstanding that prevails relative to the proper place that should be accorded X-ray and radium in the treatment of disease.

The accidental discovery of the X-rays by the German-Swiss, Roentgen, in 1895, antedates the inadvertent discovery of the power of radium rays by the Frenchman, Becquerel, by only one year. Therefore, the development of their use in medicine has been more or less concurrent and covers a comparatively short period.

Scarcely had the diagnostic wonders of the X-ray been brought before the world than the X-ray operators and clinicians became cognizant of the deleterious effects which followed prolonged or frequent exposures for diagnostic purposes. Thus, a new force was placed in the hands of physicians, the value of which could only be determined by years of experiments and experience, which necessarily were fraught with the usual pro rata of disasters and disappointments incident to the study and mastery of any powerful agent.

Likewise, when Becquerel placed a tube of Uranium in his vest pocket for safekeeping and found, several days later, a rather intense burn on his abdomen, he discovered a new force, the harnessing of which has not been without its mistakes and regrets.

However, the fact that both X-rays and radium

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rays are destructive, and if misused can do irreparable injury, is a tribute to their potency, and is no argument against their judicious use.

By way of interpolation, I should like to say that to my mind this is true of practically all physical agents, and even of individuals. That is, the more potent an agent or an individual is for good, the more powerful that same agent or individual can be for evil if misused or misguided.

Thus, fire, water and air are among God's most wonderful and beneficent gifts, but none of us are hankering for a holocaust, a flood, or a cyclone. Likewise, Saul of Tarsus, was a notoriously bad man, but when he turned his intellect and energy into the channel of righteousness, and became the apostle Paul, his accomplishments for good were unparalleled.

Therefore, the inherent potentialities of the agents under consideration have occasioned much unjust criticism because of misuse or misunderstanding by those who have attempted to use them, and many of the fallacies and inconsistencies incident to their use, past and present, are in a measure thus explained.

There are, of course, many reasons that contribute to the existing divergencies of opinion as to the indications and value of radio-therapy. However, it is useless to enter into the details of controversy, for, as a matter of fact, everything and everybody of importance are controversial objects and always will be, and practically all momentous reforms and all great advances come slowly and are harassed, pestered and hindered by the assaults of selfishness, ignorance and prejudice.

But, after all is said and done, the indications and contraindications for the therapeutic use of radiant energy are very clearly defined, and the benefits and results occasioned by its use constitute one of the greatest blessings to suffering humanity. In this connection, it might be said that in no field of medicine is the importance of the "personal equation" more paramount than in qualifying as a radiologist. In the first place, the man who adopts this as his specialty should, above everything else, be honest and unprejudiced. Because he happens to have ten, twenty, or more thousand dollars invested in his therapeutic armamentarium is no reason for him to attempt to treat an early carcinoma of the breast, for instance, when this condition primarily belongs to the skilled surgeon. He should be the first man to recognize not only the definite indications for his services, but should know his limitations as

well. He should be able, by knowledge gained from study, observation and experience, to weigh the relative merits of his specialty as compared with other recognized methods and have the moral courage to accept the better method even if it should be to his financial detriment. He should know not only the physics of X-ray and radium, and the principles of dosage, but should be somewhat of a mechanical genius as well, in order to design and build suitable applicators to treat the condition in question. A thorough appreciation of the importance of the last-mentioned prerequisite, as elementary as it may seem, has enabled me to treat successfully many, many cases that otherwise I should have failed to relieve.

Another important attribute that might be mentioned is the ability to evaluate and correlate the use of other adjuncts that properly belong to the radiologist. For instance, it is absurd to treat a large protruding ulcerating malignancy with X-ray or radium without first removing the mass by fulguration or thermo-coagulation, which can be done painlessly and without the loss of blood. Thus, one can get right down to the base of the tumor with the first X-ray treatment, and incidentally reduce very materially the number of treatments, and the expense to the patient.

The question of dosage is extremely important. In the first place, insufficient dosage invariably means failure, whereas sufficient dosage may mean success. Because an epithelioma, for instance, has had repeated X-ray treatments and has not responded, does not mean that that same epithelioma is not amendable to X-ray treatment. Secondly, as a rule, frequently repeated fractional treatments are not necessary in most X-ray therapy procedures. As an illustration, an epithelioma can be, in my opinion, more successfully treated by one or two heroic doses than by often repeated fractional doses. Several years ago I coined an X-ray therapeutic maxim, which I have never had occasion to change—that is: "Relatively small areas may be treated with impunity provided the surrounding tissues are properly protected from radiation, whereas, in treating over-large areas of sound skin, one can not exceed certain dosage limitations without courting disaster." This is literally true and is extremely significant as applied to the early treatment of malignancies involving the cutaneous or mucous surfaces.

As to the indications, contra-indications, the relative merits, and the results of X-ray and radium therapy, I could not begin to cover the field

in a paper of this nature, and shall only attempt to bring to your attention a few of the more important and practical things which might be of interest to you.

When we think of X-ray treatment, we doubtless almost invariably associate it with skin cancer, and rightly so. Practically one hundred per cent of epitheliomata can be cured by X-rays if treated early and properly, and without pain or inconvenience. In my experience, radium is in no way superior, in the treatment of these cases; however, fulguration and thermo-coagulation are invaluable adjuncts in selected cases. Suspicious pigmented moles should be removed by thermo-coagulation and the base treated thoroughly with X-ray. In treating epithelioma about the eyelid, I make a saucer-shaped lead protector covered with rubber, and place it beneath the eyelid before giving treatment. When the growth is accessible I always use X-rays instead of radium. Radium is infinitively preferable when treating in cavities. Cancer of the lip is best treated by a combination of thermo-coagulation and X-ray, and the treatment should be done courageously without any half-way or piecemeal measures. And don't be misguided by the enthusiasm of those who insist in the promiscuous and indiscriminate use of radium needles or radon implants. They doubtless have their indications, but in most instances, safer and more satisfactory work can be done without them. Carcinoma of the breast is primarily a surgical condition. Radiation may be used advantageously post-operatively, also in inoperable and recurrent conditions. In cancer of the cervix, the choice of treatment depends in a great measure upon the skill and facilities available—both surgery and radium offer much if operated or treated very early; both offer little in the later stages. The present trend is toward radium as the more recent statistics tend to confirm the wisdom of such a policy, especially in view of the mortality incident to the operation. While in the treatment of cancer of the uterine body, the divergence of opinion is more clearly emphasized, there being good authorities on both sides of the question. My personal opinion is that the preponderance of advantage is not great on either side so far as end results are concerned, especially when taking into full consideration the mortality and morbidity incident to operation. Both offer much in the early stages, but little in the advanced stages.

Another class of cases in which both radium and X-ray have very definite indications is benign

uterine hemorrhage, which may or may not be associated with uterine fibroid. Certainly one should not treat all cases of menorrhagia and metrorrhagia, nor all cases of uterine fibroids with radium or X-ray. For instance, in young women in which the preservation of the menstrual function is an important factor, other measures should be given first consideration. Likewise, in very large fibroids in which there are pressure symptoms, or in pedunculated submucous fibroids, surgery certainly should be given first consideration. In selected cases of menorrhagia, metrorrhagia, and uterine fibroids I know of no more rational treatment than X-ray or radium, nor more satisfactory results in the entire domain of medicine. In those cases of menstrual aberrations at or near the menopause associated with irregular or excessive bleeding, and in which there may or may not be a suspicion of malignancy, I know of nothing more nearly a specific than radium or X-ray, and of the two agents, radium is by far the more valuable. I have treated literally hundreds of these cases with approximately one hundred per cent satisfactory results, and, so far as I know, in not one instance has cancer developed in those cases in which there was merely a suspicion of malignancy, but which was not demonstrable at the time of treatment. I feel convinced that it is reasonable to assume that a certain percentage of those cases, even though it may be a small percentage, are due to incipient carcinoma. Therefore, in my opinion, the results obtained are, indeed, a tribute to the efficacy of radium, and emphasize most forcibly the necessity of early treatment.

In the treatment of naevi, radium is unquestionably superior to all other methods. However, X-ray properly given in selected cases gives excellent results.

There are many other conditions in which X-ray and radium stand out pre-eminently as therapeutic agents, such as persistent thymus, keloids, acne vulgaris, polyps, etc., the results obtained being in a large measure commensurate with the skill of the radiologist.

CONCLUSIONS

(1) A combination of X-rays, radium and electro-coagulation in judicious, experienced and skillful hands constitutes one of the greatest weapons known in combating certain physical ills; one whose indications are most clearly defined, and results most certain, but which is a positive menace if misunderstood and misused.

(2) The selection of cases, and, in many instances, the stage at which treatment is instituted, are of paramount importance.

(3) The radiologist who has as much as one hundred milligrams of radium, in addition to a modern X-ray therapy machine and diathermy machine, and who knows how to use them separately and conjointly, can show results comparable with those obtained in large institutions in which large amounts of radium are available, except in cases like carcinoma of the prostate or oesophagus, in which specially built apparatus for the introduction of larger quantities is used.

(4) My experience is that the X-ray can supplant, for all practical purposes, the use of radium, except in treating in cavities, and in the treatment of naevi.

(5) Practically all accessible malignancies involving the skin and mucous membrane, excepting melanotic tumors, are curable if treated early—practically all are hopeless in the later stages.

(6) In the treatment of relatively small circumscribed areas of malignancy, the so-called fractional treatments, often repeated, do not yield as satisfactory results as the more intensive and less frequent treatments do.

(7) Deep-seated malignancies, with the exception of lympho-sarcomata, do not yield satisfactorily to X-ray and radium treatment, and such deep-seated tumors as carcinoma of the stomach and intestine are primarily surgical and should be operated at the earliest possible moment. X-ray and radium may be used as an adjunct. However, it is my opinion that in such cases their real value may often be questioned.

DISCUSSION

Dr. J. M. Hoffman, Pensacola:

I believe that Dr. Weed has covered a very timely subject in this paper. The attitude of the public in general is very unfavorable. I have had some experience, myself, with unskilled technicians with X-ray machines and have seen some very disappointing results. This is one field where the operator must be skilled in his particular line. Frequently the average physician or general practitioner who is not connected with the larger schools sees these results and obtains the impression that radiology and roentgenology are not of value.

In these indications as Dr. Weed mentioned: In the treatment of skin cancer I, personally from my own experience, feel that it is about 50-50 with X-ray and radium. Of course, some of our

surgeons, men like Bloodgood, feel that even skin cancer is a surgical procedure if done thoroughly. You are familiar with the operation where he removes all lymphatics that drain the part. However, I believe that the ordinary superficial skin malignancy can well be handled with radiation. In cavities, of course, radium is the method of choice.

One contraindication that Dr. Weed did not mention is the question of cyst of the ovary. I saw one case in particular of necrosis in the wall of an ovarian cyst that caused some real trouble.

The paper is very timely, and I appreciate Dr. Weed's presenting the subject.

Dr. Walter A. Weed, Lakeland (closing):

There is nothing further that I wish to say except a passing reference to contraindications as suggested by Dr. Hoffman. There are, of course, a number of contraindications that I did not mention, and which could not be covered adequately in a paper of this character. One contraindication that should always be kept in mind is pelvic inflammation. There are a number of others with which every physician should be familiar.

PROTEINS IN HUMAN PATHOLOGY*

T. M. RIVERS, M.D.,

Kissimmee.

Definition: Proteins are nitrogenized colloid compounds forming the characteristic constituents of the tissues and fluids of animal bodies. They are widely distributed throughout the vegetable kingdom as well as the animal kingdom. They are made up of amino acids and their derivatives which are first formed by plants and received by animals, either as food for tissue building and repair, or as foreign material to injure and destroy animal tissues.

Chemistry: The protein molecule is made up of the five basic elements, carbon, hydrogen, oxygen, nitrogen and sulphur and may contain other elements in some of the tissues. The molecule is very large, its atomic weight sometimes running into the thousands. Analytically, it can be studied no better than through the processes of digestion, absorption, assimilation and elimination. We learn that food proteins taken into the stomach are of molecules too large to be absorbed through the healthy walls of the stomach; but

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they are here broken up by the action of the pepsin and hydrochloric acid into fractional molecules called peptones and proteoses. These are passed on into the intestines where they are again divided by the trypsin and other intestinal ferments into smaller fractional molecules, and finally into amino acids which may be considered the basic units of the proteins. It will be observed that the proteins and their fractional molecular units all the way down to the amino acids, are colloids; but the amino acids are crystalloids, which have a greater solubility and therefore a greater capacity for being absorbed. Once the amino acids are carried through the mucous membrane of the intestines they are carried by the portal circulation to the liver where the liver cells serve as inspectors, passing some of these amino acids on as good building material, or good building stones, as Von Furth so aptly designates them, reconstructing others so that they are made good building stones, and, finally, rejecting others as useless fragments, converting them into urea and passing them on to the kidneys where they are thrown out as worthless material. The good amino acids are carried by the blood to the various tissues of the body where they are assimilated and built back into tissue proteins for repair or growth of the various tissues of the body. Now it may be observed here that the amino acids are about twenty in number. Chemically, they are made up of the acid radical, COOH , and the alkaline radical, NH_2 , so that the amino acid may be built to from either radical, serving either as acid or as base or both. These simple amino acids may combine acid to base, forming a dipeptid. These may combine further, forming polypeptids. It is by these combinations that we get back to the protein molecule. However, it is here that we may observe occasional sidestepping from the regular synthesis of the protein molecule. By eliminating CO_2 from the amino acid an amine may be formed which may be highly toxic, doing great bodily injury instead of the normal tissue-building. We will remember that the blood of the human should be very slightly alkaline, almost neutral; and any variation from this alkalinity means disease. Now, if some other acid should combine with the base end of the amino acid so as to form a strongly acid amino acid, we can readily understand that we may approach an acid condition of the blood, which would be a morbid condition of the body and result in serious morbidity if exaggerated.

Classification: Based on the chemical formation and action of proteins, there are three general classes. First: Simple proteins, or proteins which yield only α -amino acids or their derivatives on hydrolysis. They are albumins, globulins, glutelins, albuminoids, histons and protamins. Second: conjugated proteins, proteins which have the protein molecule united to some other molecule otherwise than as a salt. They are nucleo-proteins, glycoproteins, phosphoproteins, hemoglobins, etc. Third: derived proteins, that is, derivatives of the protein molecule formed by hydrolytic changes. They are proteoses, peptones, peptids, etc. Besides this general classification there are numerous irregular classes of proteins, as bacterial proteins, produced by bacterial action or by maceration of the bodies of bacteria; defensive or protective proteins, which are formed in the body to counteract toxic proteins or the bacteria producing them, as alexins, phylaxins or sozins. Soluble proteins are those which may be passed into solution with some liquid while insoluble proteins are those which are precipitated when others are dissolved.

Absorption, Assimilation and Elimination: Protein molecules, as we learned above, are of very large size and are of colloid consistency so that they are filterable and are barely capable of being absorbed through healthy mucous membranes of the human body. As we know, most foreign proteins are not of the proper structure to be assimilated into the tissues of the human body, and many of them are actually toxic. Such food proteins as milk and eggs injected directly into the blood, are not assimilated but are eliminated as such from the kidneys. While proteins are not absorbed as such by, or through, the healthy mucous membranes, they may be absorbed through the abraded or diseased mucous membranes, and, in this way, enter the tissues and become a menace to the health of the body. This may account for some escaping the toxic action of spoiled meats in cases of botulism, while others are poisoned by eating the same meats. It is a common saying among the laity that one may suck the poison from a snakebite with impunity, if he has sound teeth, while the same act is dangerous for one with decayed teeth. It is even probable that one might swallow the poison from the snake without injury if his alimentary tract were in perfect condition and in healthy state in every part. We may observe an application of this in the onset of asthma. The asthmatic may

live in the midst of the sensitizing protein without an attack till some change in the weather conditions causes the mucous membranes of the upper air passages to swell from a common cold. Immediately upon swelling the foreign sensitizing protein inhaled is absorbed and an attack of asthma is precipitated. Many asthmatics have some chronic inflammation of some part of the upper air passages, of the nose, the tonsils, or the throat, due to tuberculosis, syphilis, or other infection, which makes possible the absorption of the sensitizing protein at all times. Asthmatics with chronic inflammations usually continue to suffer from asthma as long as they are in the vicinity of the sensitizing protein. These cases may be relieved to a great degree by healing the diseased mucous membranes through which the sensitizing protein is entering the body. The albumen of eggs sometimes serves as sensitizing protein and its absorption may be prevented by treating an ulcerated or catarrhal stomach. There can be little doubt that people, otherwise healthy, suffer from general or localized rheumatoid pains caused by the absorption of undigested foreign proteins through the diseased or ulcerated mucous membrane of some part of the alimentary tract.

In the investigations and study of absorption through membranes, it has been well established that certain substances may be absorbed through in one direction, but the same substance may not be passed back in the opposite direction. Just such provision is made in the structure of the human intestinal tract. The amino acids may be normally absorbed from the lumen of the intestines to the blood of the opposite or outer side of the intestinal mucous membrane; but the normal mucous membrane of the intestines will not permit these same amino acids to pass back from the blood to the lumen of the intestines: a wonderful provision of nature to hold and conserve all that food which has been absorbed. While much of the waste products of the body is eliminated by the skin and the lungs, the kidneys serve as the great outlet for the waste products of protein metabolism and catabolism. The healthy mucous membrane of the tubules of the kidneys, unlike that of the alimentary tract, may permit the passage of large molecules, even those of whole proteins being readily discharged if they are foreign to the body requirements. The kidney cells have selective action in excreting and will not permit the passage of those proteins which are of further use to the body tissues so long as these cells are

healthy and the internal pressure of the blood is not too great. As we all know, we are inclined to declare a diagnosis of kidney disease if much albumen is escaping with the urine. Now let us observe what happens when the excreting cells of the kidneys are diseased. They lose their selective action just mentioned and are dependent on the internal pressure of the blood to keep up the elimination of the body waste products. Having lost their functional ability of selective elimination, these cells eliminate only that which is forced through most easily by the internal pressure, which means that some of the protein in the form of albumen may escape while some of the waste products is filtered back and retained in the body.

As we stated above, the liver cells have much to do in preparing the digested proteins in the form of amino acids for assimilation. The healthy liver cells serve as inspectors of amino acids, the building stones of the body tissues. We have shown how the liver cells inspect these building stones, passing the good stones along to the general circulation to be assimilated into body tissues, working over other stones into proper form and condition to be used and passing them on to the tissues, and, finally, converting the worthless fragments into urea and passing it on to the kidneys to be eliminated. Now, when the liver and kidneys are in a healthy state and are functioning well, these processes go along without a hitch; but when the liver is not normal, and is not functioning, these building stones are passed on into the general circulation in a useless condition and serve to clog the tissues with worthless material instead of serving as tissue builders. Through the processes of metabolism and catabolism, these useless products may be converted into uric acid and its several salts besides many other useless products of catabolism which may clog the tissues of the body, resulting in gout, neuritis and other constitutional disorders. Now, if the kidneys are in a healthy state and are functioning well, these waste products may be eliminated before any serious diseased condition results; but, if the kidneys are diseased, too, so that elimination is checked, then these diseases become exaggerated and chronic. This is the morbid condition of the entire body which is so often seen in people past middle life causing that syndrome of symptoms known as hyperpiesia, or essential hypertension, with its final end results of apoplexy, or dilated heart resulting in rupture in extreme cases.

Another kind of foreign protein which may be toxic to the human body is that which comes from infection. This may be either of three kinds. The infecting organism may produce toxic protein through its own metabolism, or a foreign protein toxic in character may result from the breaking up of the bodies of the infecting agent. The former of these is well exemplified by the bacilli of diphtheria and of tetanus. These bacilli produce their specific soluble toxins (poisonous proteins) which produce the specific symptoms of these diseases. The latter has as examples such diseases as typhoid fever, cholera and the plague. The paroxysms of fever from malaria are believed to be caused not by the direct toxins of the protozoa, but by the foreign proteins resulting from the disintegrating corpuscles caused by the sporulating protozoa, which would represent the third class of protein poisoning from infecting organisms.

A class of protein products which may become disease producing when the liver and the kidneys are not functioning normally, is that resulting from tissue catabolism. When the normal catabolic processes are transpiring, the waste products of the broken down tissues are either remetabolized into useful body proteins, or they are changed into urea and discharged by the kidneys; but, when the liver is not functioning properly, these waste products may not be reconstructed into useful body proteins; and, when the kidneys are not eliminating normally, the urea may not be eliminated as it should be, and the waste products may, in this way, be retained to clog the tissues just as those proteins from the food may be retained to the injury of the body tissues.

Having discussed the several kinds of toxic and injurious proteins, it is well that we turn to those proteins which serve a beneficial purpose in the body economy. We have already mentioned those proteins which serve as food or body builders. Besides these there are three general classes of substances akin to proteins which are useful to the body. These are enzymes, endocrines and antitoxins. Each of these classes comprise several subclasses which it is useless to try to enumerate in this paper. Food proteins may be defined as body builders, while the enzymes are the food preparers. Endocrines are the body regulators and the antitoxins are the body defenders. It would require volumes to discuss these properly, for which reason we will leave them with this mere mention.

Treatment: The morbid conditions due to the several faults of proteins comprise a large percentage of all the diseases to which the human body is subject; and it is the object of this paper to classify these diseases so that we may adjust our treatment with more ease of thought. It will be observed that all morbid conditions due to proteins are caused by one of three conditions, viz.: by excess of proteins, by deficient proteins, or by toxic proteins. The treatment resolves itself into preventive, eliminative, substituting, neutralizing and symptomatic.

As food is the greatest source of body proteins, let us discuss food regulation to prevent disease. In studying the various foods, we find that there is not one which serves as a perfect food throughout a long life. Milk approaches nearest to the perfect food, but it is perfect only during the early months of childhood. The casein of milk, the edestin of hempseed, or the white of eggs furnish all of the necessary proteins so far as we know; but a person left to subsist on either of these does not develop all of the qualities of health and strength that he does when given a more varied diet. Gliadin of wheat seems to maintain an adult but does not produce growth. Gliadin is deficient in the amino acid lysin. If zein, the principal protein of corn, be the sole food protein, the health fails at once. Zein is deficient in several of the amino acids, three of which are lysin, tryptophan and glycocoll. It has been the custom of man throughout many centuries to eat a varied diet, usually from taste and desire; and it is only recently that medical science has determined the true causes of diseases due to deficient diet. So, in protein diseases, one of the first thoughts is adjustment of diet. If the disease be due to deficiency of the required proteins, these should be supplied. However, where there are toxic conditions from excess of proteins in the body, as in gout, the protein content of the food should be reduced. Where there is disease of the liver and kidneys, causing a general clogging of the tissues from retained fragments of proteins, these proteins should be reduced to the minimum in the food supply, and the kidneys should be stimulated to eliminate that which has already accumulated in the body; while, if the retained protein is producing symptoms of acidosis, some neutralizing drug should be given to neutralize the acid. This may apply to such cases as essential hypertension and those allied conditions.

In such diseases as urticaria, hay fever, spas-

modic croup and bronchial asthma, the cause should be sought, both as to sensitizing agent and the diseased mucous membranes which permit the absorption of the sensitizing proteins, and these conditions should be treated. Diseased tonsils should be removed. Nasal polyps should be removed and their diseased bases treated. Ulcers and inflammations of the nose and throat should be sought out and treated. Diseases of the alimentary tract should be investigated and treated. The appendix and gall-bladder should be carefully examined. The cure of these points of entry may make a wonderful change in the frequency of the attacks of these diseases. Certainly, we must not forget the processes of desensitizing; but, when we think of the numerous sensitizing proteins, it becomes an extended task which is liable to result in the loss of a patient and a doctor's reputation before we reach the causative agent in a given case. It is well here to mention the fact that practically all toxic proteins are acid; and the use of mild alkaline gargles and nasal douches may help to prevent the entry of sensitizing proteins; but such remedies must be mild else they may damage the mucous membrane and produce the condition which we are trying to prevent. Where an alkali can reach the sensitizing protein, it should alleviate the symptoms to some extent by neutralizing the toxic protein.

It is useless to try to enumerate here all of the means of prevention of the acute infectious diseases, which are essentially all diseases from protein poisoning: some by producing toxins as a product of their existence, some by forming toxic proteins from breaking up their own bodies, and some by producing toxic proteins of the body tissues which they destroy. For these we have our disinfectants, our vaccines, our bacterins and our antitoxins; and, when the body becomes too much clogged with these toxic proteins, we have access to our neutralizing agents and our eliminants. With these diseases, too, we have to give attention to the points of entry and use whatever means we are able to devise to remove these and prevent further invasion of the body.

Finally, we must resort to our symptomatic treatment; and it is to be regretted that modern medicine continues too much in this class. This includes the host of remedies for which we write our prescriptions which keep us on the best of terms with our local druggists. Certainly, we must not overlook our cathartics, diuretics, antipyretics, sedatives, anodynes, soporifics and a host

of others; but we must not forget that these are only symptomatic remedies. Modern medicine provides many means of diagnosis which our predecessors did not possess; treatment is more specific than it was formerly; and we should attempt to use the specific remedies which are at our disposal. This is a day of fewer drugs with the use of specific remedies in more cases.

Now, that we have tried to cover in a general way a subject that would require a library in itself to discuss fully, we hope that we have brought out some thoughts in this condensed discussion of a broad subject that you may consider worthwhile and that you may carry home with you to help to direct your thoughts in your further study of this important subject. If we have added one thought to your store of medical knowledge we will consider our efforts worth while.

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RADIOTHERAPY IN THE TREATMENT OF UTERINE FIBROMYOMAS.*

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The etiology of fibromyomas of the uterus is obscure. They are found more frequently during middle life and very rarely occur before puberty or after the menopause. Some authors think that sterility is a cause of fibroids while others contend that fibromyomas produce sterility. In a series of 1,149 cases reported by Kelley and Cullen, more than 50% were in women who had never been pregnant. Mary Elizabeth Hanks, reporting 350 cases, states that 65% of the married women had given birth to from one to six children. Fibromyomas are more prevalent in the colored than in the white race, the ratio being approximately 4 to 1. Autopsy records at the Johns Hopkins Hospital showed that 33.7% of all negroes over the age of 20 had uterine fibromyomas while only 10% of the white females were affected by them.

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Fibroid rests laid down many years before they develop into palpable tumors are mentioned by Ewing. Hyperpituitarism and hypothyroidism are mentioned as etiological factors by Polak.

Anatomically, uterine fibromyomas may be classified as the interstitial, submucous and subperitoneal. It is probable that all these tumors begin as interstitial growths and that as they enlarge they remain at the point of origin or in their growth inward or outward they become submucous or subperitoneal. They are frequently multiple and more than one of the above class may occur in the same uterus.

From the radiotherapeutic standpoint, uterine fibromyomas may be classified as follows:

- (1) Small symptomless fibromyomas found on routine pelvic examinations.
- (2) Fibromyomas complicated by active pelvic inflammatory disease.
- (3) Tumors associated with much pain.
- (4) Tumors complicated by malignancy of the body of the uterus.
- (5) Tumors definitely interfering with the functions of the rectum or bladder.
- (6) Fibromyomas associated with chronic lesions of the cervix demanding treatment.
- (7) Those that occur in women under the age of forty.
- (8) Those that develop after the age of forty.

It is true that the great majority of uterine fibroids in this country are removed surgically while many European gynecologists refer such patients for radiotherapy. Wood states that during the last seven years at St. Luke's Hospital 1,443 fibromyomas were removed surgically and only twenty such patients were referred from the surgical service for radiotherapy. The treatment of fibromyomas, when classified properly, is either observation, operation or radiation and the great divergence of therapeutic opinion may be due to a failure to classify them accurately.

If routine pelvic examination is made of all patients, many small, symptomless fibroids will be found. These demand no treatment but they should be kept under observation and proper treatment instituted if it should be indicated. Some of these tumors will be diagnosed at or near the menopausal period and frequently disappear without treatment.

Fibromyomas, complicated by active pelvic inflammatory disease producing fever and leukocytosis, should be treated surgically. Chronic

pelvic inflammatory disease is not a contraindication to irradiation of a uterine fibroid.

The frequency of such inflammatory diseases complicating uterine fibroids has been overestimated. Wood states that laboratory records of the last 150 fibromyomas removed at St. Luke's Hospital show that only 41 of these were accompanied by chronic pelvic inflammatory disease of the adnexa and that none of them showed an acute inflammatory lesion.

Fibromyomas, associated with much pain, should be treated surgically since a painful tumor usually indicates that there is an acute inflammatory lesion present or that there is torsion of the pedicle of the tumor.

Tumors that are large and hard on account of the possibility that they may be sarcomatous should be removed surgically. Calcified or degenerating tumors should be removed surgically. Calcified tumors can easily be demonstrated by X-ray examination.

Fibromyomas known to be complicated by malignancy of the body of the uterus should be treated surgically. These cases are not often diagnosed clinically and are occasionally referred for irradiation but when the tumor does not respond to a few treatments, the radiologist should suspect a malignant complication and request a very careful examination to rule this out. However, the frequency of malignancy of the body of the uterus complicating fibroids is much less than the surgical mortality in the treatment of uncomplicated tumors. Therefore, it is evident that if all fibroids including those complicated by malignancy of the body of the uterus were treated by irradiation the mortality rate would be considerably less than that obtained by surgical treatment of all uncomplicated tumors.

Fibromyomas producing pressure symptoms interfering with the functions of the rectum or bladder should be treated surgically due to the fact that such conditions demand more prompt relief than can be expected from radiotherapy.

With the exceptions of the above classes of fibromyomas approximately all of them will respond satisfactorily to radiotherapy, so that it is necessary to evaluate the advantages of radium and X-ray as agents of choice in the treatment of such tumors. That they may be used jointly in some cases, each serving a special therapeutic purpose is unquestionably true.

Many gynecologists and surgeons have used

radium in the treatment of fibromyomas and have contributed much information concerning its value as a therapeutic agent. Kelly, Schmitz, the late John G. Clark, Howard Taylor, clinicians at the Huntington Hospital of Boston and of the Memorial Hospital of New York have given valuable information concerning the efficacy of radium.

Fibromyomas associated with lacerated, infected, hypertrophied or eroded cervixes which may be considered potential malignancies should be treated with radium applied in the cervical canal and X-ray over the uterus and ovaries. This plan of treatment should be executed in the same way that a malignancy of the cervix is managed. Practically all gynecologists and surgeons are referring malignancies of the cervix for radium treatment, but if this is supplemented by deep X-ray therapy there will be a greater number of cures obtained.

Considering our major classifications last, we have fibromyomas occurring in women under the age of 40 and those over the age of 40. Approximately 20% of the fibromyomas are diagnosed in women under the age of 40, and in considering the method of choice in their treatment many factors should be considered.

Subserous or fibroids involving so limited amount of the uterus that they can be removed by myomectomy or hysteromyomectomy leaving the patient in such anatomical condition that a normal gestation may take place, should be treated surgically.

Multiple fibroids or those in which the surgical procedure would be removal of the uterus should be treated by radiotherapy, preferably the roentgen ray. It is possible to cause a regression of uterine fibroids by radiotherapy without producing an artificial menopause. This is accomplished by blocking the ovaries and treating only over the tumor area to obtain the direct effect that irradiation has on such tumors. That radium and X-ray have a direct effect upon such tumors is evidenced by their frequent disappearance under radiotherapy in women past the menopause and in those who have had the ovaries removed. All patients who have any general physical disease that render them hazardous surgical risks should be treated by radiotherapy regardless of age. If an artificial menopause is produced by radiotherapy in treating a patient of this age there will be no greater menopausal

symptoms produced than would occur following hysterectomy, because it is conceded that the ovaries atrophy in a year or two after the removal of the uterus.

Approximately 80% of all uterine fibromyomas occur after the age of 40. Wood's series shows 77%. Neill, reviewing 650 cases treated at the Howard A. Kelley Hospital, states that 75% of all uterine fibroids are amenable to radiation regardless of whether they are subserous, interstitial, submucous, single or multiple. Since the great majority of all uterine fibroids responds satisfactorily to irradiation when treated to the point of an artificial menopause which is justified after the age of 40 the choice of radium or X-ray should be considered. The untrauterine application of radium at the time of a curettage is very easily done but it is doubtful if such procedure accomplishes the best results. The hard, highly penetrating gamma rays of radium are not indicated in an uncomplicated uterine fibroid. An irritating discharge frequently follows the application of radium in the uterus and there may be a stenosis of the cervix resulting in pyonutra. Burns of the intestines due to previous adhesions have been reported. The application of radium necessitates hospitalization and is more expensive to the patient.

The advantages of roentgen treatment are that the time of each treatment is short, the patient is ambulant and that there is usually no post irradiation sickness. Economically considered the expense to the patient both in time and fees charged are in favor of roentgen treatment. The routine plan of X-ray treatment of uterine fibroids after the age of 40 contemplates a gradual rather than a precipitate menopause and deep therapy is not necessary except in potential malignancies of the cervix. Routinely, the posterior aspect of the pelvis is treated at one sitting using 180 K.V. with $\frac{1}{4}$ mm. of copper and 2 mm. of aluminum as filters. The distance is 50 cm. and an erythema dose is given. The anterior aspect is divided into two areas and the treatment repeated in four weeks. Usually two treatments are required to produce a menopause but in patients under the age of 40 additional treatments may be necessary.

It is known that the follicular tissue of the ovary is the most radiosensitive and that the primordial and interstitial tissues are not much affected by the dosage usually given in X-ray treatment of a uterine fibroid.

My experience has been that the menopausal symptoms following a gradual menopause produced by X-ray therapy of uterine fibroids is not characterized by any marked symptoms. In fact, they are no greater than those of a natural menopause.

Conclusions:

(1) The etiology of uterine fibromyomas remains theoretical. However, they are by far the most prevalent of all pelvic neoplasms.

(2) An accurate classification is the first essential necessary in determining how these tumors should be treated.

(3) Many fibromyomas are still treated surgically which could better be treated by radiotherapy without mortality and with less expense to the patient.

(4) Patients under the age of 40 where the alternative surgical treatment is removal of the uterus, should be treated by radiotherapy. In such cases the ovaries should be protected from irradiation and an effort made to cause a regression of the tumor without producing a menopause.

(5) Chronic inflammatory lesions of the pelvic adnexa do not constitute a contraindication to radiotherapy. Chronic lesions of the cervix which may be regarded as potential malignancies demand radium applied in the cervical canal supplemented by deep X-ray therapy externally.

(6) The great majority of the uterine fibromyomas occurring after the age of 40 should be treated by X-ray which produces satisfactory results in practically all cases.

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VENOMOUS SNAKES*

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Snakes may be classified so far as the fangs are concerned into the aglypha, or fangless snakes, which are of course nonpoisonous; the opisthoglypha, or snakes having fixed fangs far back in the roof of the mouth; the proteroglypha,

or snakes having fixed fangs in the forepart of the roof of the mouth; and the viperine snakes, having long, curved, movable and erectile fangs in the forepart of the roof of the mouth.

The opisthoglypha are possessed of grooved but not canaliculated fangs which are so far back in the mouth as to make it difficult, or in some species impossible, for them to effectively bite an animal of size. Hence, for the most part, they may be classed as not dangerous to man; their fangs and their poison are used mostly for the purpose of benumbing and paralyzing their prey, thus being enabled to swallow it more easily. These snakes include about eighty genera, some of which are river snakes, some arboreal, some terrestrial, some of burrowing habits and some semi-aquatic.

They are found in all parts of the world except the northernmost sections. I know of but one member of this group that is found in Florida and that is the *tantilla coronata*. It is ten inches long, slender, the fangs are almost microscopic and hence, as a menace to man, may be entirely ignored. It has a black head with a black-bordered, yellowish collar. I merely mention it here to show that each division of fanged snakes is represented in Florida as well as a very large number of fangless or harmless snakes.

It may be interesting here to state that if one will but take the trouble to carefully dissect the salivary glands of a harmless snake, a slightly separated lobe of a yellowish cast will be discovered and it is this lobe still more distinctly differentiated in the poisonous snakes which becomes the poison gland—a fact of some interest to the student of evolution. The proteroglypha include some thirty-nine genera, ten genera of which are sea snakes and some twenty-nine genera terrestrial or burrowing snakes.

These snakes do not have long fangs but their poison is exceedingly deadly to man, quick in its action and centering its effects principally upon the nervous system.

The fangs of the proteroglypha are on the average not greatly larger than the fangs of the opisthoglypha but they are canaliculated instead of grooved. They are connected with poison glands secreting a far more virulent poison than that of the opisthoglypha, however, and in much greater quantity. The fangs, as has been stated, are rigidly attached to the forepart of the upper jaw and do not fold up as with the viperine class of snakes.

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The tail of the sea-snake is vertically compressed or paddle-shaped for the purpose of being used as a propeller. There is but one species found in the waters of the new world. This is the yellow-bellied sea-snake off the west coast of Southern Mexico, Central and Tropical South America. It reaches a length of only about three feet. It is scientifically known as *hydrus platurus*. I need not consider this reptile here as I wish to devote most of my space to snakes with which we should become familiar in the United States and more especially in our own section.

Of the twenty-nine genera of elapine snakes belonging to the family of proteroglypha, there are ten species of the genus *naja* or cobra found in Africa, Southern China, India, the Malay archipelago and the Philippines. This snake strikes viciously and chews from two to five seconds before letting go. At least one species of "sepedon," a closely allied genus, the "sepedon haemachates," spurts or sprays a fine jet or stream of venom a distance of six or eight feet and seems to get a very accurate aim and range for the victim's eyes which may result in blindness or even death.

This snake is the deadly "ringhals" of South Africa.

There are nineteen genera related more or less closely to the cobra but one genus alone belongs to the new world while Australia literally swarms with elapine serpents, the deadly snakes far exceeding the harmless upon this great island continent.

There are twenty-six known species of elaps in the new world; many of them in tropical South America and Central America, being of a size to be really dangerous to man.

There are but two species found in the United States, the elaps *fulvius* or "harlequin snake," also called "coral snake" of the gulf states and the elaps *euryxanthus* of the southwest, also called "coral snake" or "sonora coral snake."

The harlequin snake has a black snout, a yellow band across the head followed by a black ring. The southwestern species has a black snout, a yellow band across the head followed by a red ring.

This is a point that distinguishes the species. There are many harmless snakes mimicking these markings to a more or less superficial resemblance; but it is sufficient so far as these two United States species are concerned to remember only that the poison varieties have always a black

snout while the beautiful little *cemophora coccinea*, or scarlet snake, of the southeastern United States has a red snout. Other marked differences of interest to the scientist would best be ignored by the amateur observer as likely to confuse by multiplicity of detail.

By far, the most numerous of all poisonous snakes in Florida is the coral snake, but as it is a burrowing snake in its habits, many people who have lived in Florida for years have never seen one.

Its coloring is so gorgeously brilliant as to make it appear as though painted with the most brilliant tints of red, black and orange rings, the rings of black and red being especially brilliant and broader than the orange colored rings which always border the black and separate it from the brilliant red. The rings extend around the body. The red rings are omitted below or beyond the vent, and only black and yellow rings occur and the yellow bands become broader for the whole length of the tail beyond the vent.

The fangs of the coral snake of the southeastern United States are short, as are the fangs of all species of the coral snake; the mouth opening capacity is small. The snake will not strike if not actually touched; its eye-sight, like that of all burrowing snakes, is poor. The poison, while very virulent, is small in quantity and, as it cannot make its fangs penetrate clothing of any great thickness, bites are very rare and a complete injection of its venom is still rarer. Hence, the snake may not be seriously considered but it is well to bear in mind that its venom is virulent and that a death from its bite is not only a possibility but actually has occurred. I have personally measured a specimen of elaps *fulvius* which measured slightly more than a yard in length.

The fourth important group of snakes is the viperine snakes which include about one hundred eleven species.

The viperine snakes have the most highly developed and peculiarly efficient specialized poison injecting apparatus of all the poisonous snakes. The fangs are much longer and more curved than those of the opisthoglypha or the proteroglypha measuring instead of a small fraction of an inch, as in most of the species belonging to the two series before mentioned, to as much as $\frac{7}{8}$ of an inch in the great diamond-backed rattlesnake and $1\frac{3}{8}$ inches in a large bushmaster.

The viperine snakes instead of the long horizontal maxillary bone characteristic of the pre-

ceding two series has a small, movable, vertical superior maxillary so hinged and connected with the large, highly-developed poison gland as to allow the fangs to be folded backward out of the way when not in use. When striking, the fangs are erected and thrown forward and, being perfectly canaliculated, afford a peculiarly efficient injecting apparatus for placing the venom deep into the tissues of the victim.

The viperine snakes are divided into two classes, the "true vipers," none of which are found in the new world, and the "pit vipers" which in some species or other are found in both the new and old world.

The true vipers have no head-pits. There are forty-three species in the old world. The pit-vipers are marked by a deep pit between the eye and nostril on each side of the head. The function of this pit is not yet known but that it performs a function of some importance can hardly be doubted as the pit is lined with a membranous skin, is connected with a secondary pit close to the eye and there is a large nerve connecting the pit with the brain suggesting at least that it may be a special sense organ.

The pit vipers include two general classes—those without rattles on the tail and those with rattles (the rattlesnakes). There are about sixty-eight species of pit-vipers.

The pit-vipers, not having rattles, are divided into two classes—those with symmetrical plates on top of the head, known as *ancistrodon* or moccasin genus, and those with small scales on top of the head, the *lachesis* genus.

The rattlesnakes are divided into two genera. Those having the top of the head covered with symmetrical plates comprise the genus "*sistrurus*" while those having small scales on top of the head are the members of the genus *crotalus*.

The terrible *lachesis* genus is not found in the United States but is common in southern Mexico, Central and Tropical South America, some of the islands of the Caribbean Sea and, too, a few smaller species in southeastern Asia.

The *ancistrodon*, or moccasin family, is represented in the old world in the highlands of India and eastern Siberia, China, Siam and Japan. The genus *ancistrodon* is represented in the United States by the water moccasin or cotton-mouth and the copperhead. In Mexico, the *ancistrodon bilineatus*, closely allied to our own water moccasin, is found.

The *ancistrodon piscivorus*, or water moccasin,

is a very dangerous reptile and needs a careful description. This snake has been known to reach the length of six feet but a four-foot moccasin must be regarded as a large specimen. It is a dull, olive brown; in fact, very dark in color with wide, darker, nearly black transverse bands. It has an elliptical, cat-like pupil and there is only one row of subcaudal tail plates for the greater length of the tail, while the harmless snakes which most closely resemble it have a round pupil and two rows of under-tail plates.

The bands of darker color across the body of the water moccasin are much more distinct in the younger snakes and, indeed, they are not easily distinguished except upon close examination in the older specimens. The inside of the mouth is very white, hence the name cotton mouth. The range of the cotton mouth is from Massachusetts to Wisconsin, in the north; to the gulf states of the south; and it is also found in the great southwest. It is very rare in the northern limits of its range but very common in the south. The copperhead or "*ancistrodon contortrix*" has about the same range as the water moccasin but seems to love most a rocky southern slope running off toward lower land. It is seemingly found in Florida only in the northern part of the state. It is dangerous but to a much less degree than its cousin, the water moccasin.

The ground color is a pale, chestnut brown crossed by saddles of a darker reddish brown color which are narrower on the back but broader at the sides, giving, when looked down upon from directly above, a sort of dumb-bell or hour-glass appearance to these markings. The top of its head has a nearly uniform copper color, hence the name "copperhead." A large copperhead may reach three feet in length. There is but one row of subcaudal plates and the pupil is elliptical. I have never known of this snake to be found in Florida farther south than Orlando and it is not common even in the northern portion of the State.

Rattlesnakes are numerous in the new world but are not found at all in the old world or in Australia. So far, but one species has been found in South America. Several species are found in Mexico but the great habitat of the rattlesnake is the United States. The different species are most numerous in the south and particularly in the southwest, but individual specimens are probably more numerous in many parts of the north, particularly some sections of Massachusetts, Pennsylvania, New York and Michigan, than in most

parts of the south. No state in the Union is entirely free from rattlesnakes except, possibly the State of Maine, in which, it is said, no rattlesnake as yet has ever been found.

The timber rattlesnake or *crotalus horridus* is the common rattlesnake of the northeast and also of all the hill country of the southern states but it is found very rarely in Florida and only in a few counties of the extreme northern part of the state. I do not need to give a careful description of this snake as his rattle brands him as a dangerous enemy.

The *crotalus adamanteus*, or diamond-back rattler, is the largest by weight of any poisonous snake in the world. It is quite common in the southeastern part of the United States but is not found west of the Mississippi River. The southwestern diamond-back is a different species of snake and is found in two species, *crotalus atrox* and *crotalus atrox ruber*, the latter of which is also described as *crotalus exsul*.

Another small rattlesnake common in the southeastern states is the *sistrurus miliarius*, or ground rattlesnake, pygmy rattlesnake, or sand rattler. It is the smallest rattlesnake in existence and as it is common in Florida and has such small rattles that it cannot be heard more than a few feet away by even persons of the best hearing and not at all when the rattles are damp, this little snake requires a careful description.

The extreme length of this reptile is seldom twenty inches. The body is rather slender; the coloration is a steel-grey body line with a row of black blotches on the back between which are spaces of a brownish red tinge. Occasionally, a bright red band shows on the neck and a row of tiny red dots shows on the sides at the junction of side and belly. It is a strikingly beautiful little snake but its fangs are tiny, the volume of poison is small and while its bite is dangerous to a small child, it should seldom prove fatal if promptly treated.

It is often stated that a pit-viper cannot strike unless coiled for the spring. This is a dangerous error for the camera shows that the head of a rattlesnake describes a letter "S" curve when striking, the act of which is so rapid that the human eye cannot follow the movement, yet the snake, while preferring the coiled position because of the better outlook for alert defense, can and does strike when in any position in which he can gather himself to launch the fatal letter "S"

stroke. It is also asserted that the cotton-mouth cannot bite while under the water. This is a dangerous error. The moccasin cannot, of course, under the handicap of water-pressure, strike the fierce blow that he is able to let drive in the air, yet he can and does bite while under water. Such ill-informed propaganda is dangerous and is apt to throw people off their guard when obliged to deal with these dangerous reptiles.

There are many factors which tend to reduce the severity of results from snake bites. Col. Crimmins very admirably sums up these factors as follows:

1. The snake missing his goal. The snake does not see well during the day or before shedding, and may miscalculate the distance and strike a glancing blow without injecting venom.
2. Diminution in amount of venom, due to (a) hibernation, (b) aestivation, (c) previous exhaustion of the venom in feeding, (d) captivity.
3. Bite being inflicted through clothing that retains some of the poison.
4. Movement of the victim at the time of strike, making imperfect bite.
5. Region bitten being very lean, having little tissue, as on the finger, toe or shin.
6. Region bitten being very fat, so that its circulation is poor.
7. Ejection of part of the venom before the snake strikes.
8. Age of the snake—very young or very old specimens produce little venom.

Col. Crimmins also gives the following notes and comments upon the physiological effect of the venom upon human tissues from the bite of the rattlesnake and the same effects are observable to a greater or less degree from the bite of the cotton-mouth or copperhead.

"The hemolytic action causes a destruction of the red and white blood cells and the proteolytic action the destruction of other tissues. The antibactericidal action favors the development of gangrene as a consequence of the bite.

SYMPTOMS OF SNAKE BITE

- a. Profuse bleeding at bite due to the anti-coagulative action of the venom.
- b. A fiery pain due to the action of the venom on the nerves.
- c. Rapid swelling due to infiltration of connective tissue by the passage of blood caused by a

venom hemorrhagin of the nature of a cytolsin, which causes destruction of the endothelial lining of the smaller blood-vessels near the site of the bite.

d. Neurotoxic symptoms, nausea and vomiting.

e. Rapid pulse, sometimes double the normal and followed by very low blood pressure.

f. Discoloration."

The treatment of North American snake bites other than the coral snake should be by the administration intramuscularly with the syringe or intravenously, if urgent, of 10 c.c. antivenin as soon as possible after the bite occurs. If the snake has secured a perfect injection of the venom a second, third and even fourth dose of the antivenin should be given. Antivenin is a specific but it must be remembered that a large dose of venom requires a large dose of antivenin and that there is a definite relationship between the weight of the victim and the volume of the venom which must be adequately met by the antivenin. Remember that a small child will require relatively a much larger dose of antivenin than an adult. The dose of antivenin should be given at intervals of two to four hours according to symptoms.

There is much difference of opinion as to what should be advised in the absence of a doctor and in the interval before antivenin is secured when it is not at hand.

Personally, I have seen much harm from the application of the classically advised ligature between bite and heart, yet I must admit that if the bite should be an intravenous bite, the judiciously applied ligature might save a life for it is not true that the only way in which the venom enters the blood is through the lymph system. This is plainly demonstrated by the cases in which death occurs in from ten to thirty minutes after the bite. However, a ligature too tightly applied and left on too long may cause a much more extensive gangrene than would have occurred had the ligature been properly applied or even omitted altogether. If antivenin is at hand, do not use the ligature. Potassium permanganate should not be injected. A weak solution is inefficient, and a solution strong enough to destroy the venom will cause a menacing slough which may result fatally.

Dr. do Amarol's contention that bleeding from incisions does not drain off the venom to any great extent is in a measure true and yet experiments which I have personally made upon animals by injections of the aspirated fluid from the bite

of the rattle snake has resulted in the death of animals so injected with all the symptoms of rattle snake poisoning. For this reason I am inclined to believe that there is a place for aspiration and for Dr. Jackson's system of crucial incisions as described by him in all cases in which there has been delay in administering the antivenin.

My experience in the treatment of poisonous snake bites has been confined to the number of twelve bites from known poisonous snakes and about an equal number of bites from snakes of non-poisonous varieties, a number entirely too small to permit an assumption of authority so far as treatment is concerned.

It is safe to say that as many bites of harmless snakes are treated as are those of the poisonous snakes. For this reason I have emphasized the necessity of being able to recognize all venomous snakes of one's own locality at least.

Oftentimes, in a feeble or excitable individual, the psychological effect of the bite of a perfectly harmless snake may be alarming to patient and friends and the quiet assurance of the doctor will be much appreciated. The expense of the administration of antivenin may be spared also when one is sure of the bite being the bite of a harmless reptile. Lastly, if the bites of harmless snakes are to be treated indiscriminately with antivenin, a mass of unreliable statistics will be built up that will seem more favorable than facts would warrant.

It is for these reasons that I instruct all persons calling me to attend a person said to have been bitten by a poisonous snake to save the snake for me to examine and I often find that the snake suspected to be poisonous is, in fact, perfectly harmless.

Out of the last four calls to attend persons said to have been bitten by water moccasins, I found but one who had been really bitten by a moccasin. The three other bites proved to be by the *tropidonotus fasciatus* or common water snake; by the *tropidonotus* f. var. *erythrogaster* or copper-bellied water snake; and by the *farancia abacura*, the Florida red-bellied snake or so-called hoop snake. In all of these cases, I refrained from giving the antivenin and pointed out to the interested parties the most obvious differences between the moccasin and the harmless suspect.

In conclusion, may I not say that whiskey or any alcoholic liquors have no place in the treatment of snake bites and I believe that most of the

foundation for the widely prevalent faith in its efficacy is because of its success in the treatment of bites of harmless snakes and those bites of venomous snakes in which a perfect injection of the poison was not secured. The only possible good that could be derived from the use of alcoholics in snake bites would be for the psychic effect in overcoming the panic born of fear.

CONCLUSION

1. When antivenin is immediately available, no other treatment should be used.
2. Antivenin should be given in doses sufficient to get results; repeating once in 2 hours until condition of patient is satisfactory.
3. The younger the patient, the larger the dose should be.
4. Alcoholics are contraindicated.
5. Permanganate of potassium should not be used for injection; weak solutions are useless and strong solutions are detrimental.
6. In delayed cases, the crucial incisions and suction at the proximal swollen point is good practice; as is also the application of warm normal saline or saturated boric acid solution at location of the wound.
7. The identification of the biting snake should be always established if possible.
 - a. To remove doubt as to its being a venomous species,
 - b. To allay psychic depressions in case of a non-poisonous snake,
 - c. To save unnecessary expense in such cases,
 - d. To secure reliable statistics.
8. The use of the ligature around the limb when delay occurs in reaching the doctor or in securing antivenin is a questionable procedure as it may cause much more harm than good and is always a greater menace in causing gangrene; yet carefully applied and not too long it may save a life when blood vessels are injected by the reptile, for the poison is sometimes carried partly by the veins instead of by the slower absorption through the lymphatic system.

(Authors and others to whom I am indebted in preparing this paper are: Dr. Weir Mitchell, Dr. Raymond L. Ditmars, Dr. Afranio do Amaral, Col. M. L. Crimmins, U. S. A., D. A. Atkinson, M. Graham Netting, Dr. Dudley Jackson, Dr. Jno. S. McEwan, Dr. Gaston H. Edwards. The last two for valuable suggestions resulting in alterations in the paper as originally written.)

GUNSHOT WOUND OF THE TIBIA

REPORT OF A CASE*

Z. BRANTLEY, M.D.,

Grandin.

In writing a paper on any particular medical subject, it is customary to make brief reference to the literature pertaining thereto. But in this paper it is not my endeavor to put up a classic. I am merely trying to depict the practical side of a medical man's experience in a rural district practice. Furthermore, the literature at my command on this subject is scarce. However, it is a well-known fact that gunshot wounds of the bones in former years were more serious than at present, this probably being due to the more modern methods of treatment.

Back in the Russo-Japanese war, a large percentage of all bone wounds became infected and practically all wounds by Russian bullets suppurated. The majority of all lead and soft nose bullet wounds of long bones cause fractures and the same is true of small shot at close range.

The histology of the tibia is the same as that of all long bones. Such terms as periosteum, osteoblasts, circumferential lamellae, and the Haversian system which is made up of lamellae, lacunae, canaliculi and Haversian canal, all meant very little to me when I first heard of them back in my freshman year at the Atlanta School of Medicine, but all these played an important part in the case which I am about to report to you.

The Haversian canal contains artery, vein and lymphatics. The marrow canal is lined by the endosteum. The exterior of bone is composed of compact tissue, while the interior is made up of cancellous bone.

The tibia is the longest bone in the body excepting the femur. It is prismoid in form, expanded above where it enters into the knee joint and more slightly enlarged below where it enters into the ankle joint. It consists of a shaft and two extremities.

The nutrient artery supplies the red marrow of the extremities and the medulla of the entire shaft. It also supplies in part the cancellous tissue of the extremities. The extremities are also fed by the articular arteries. One or two large veins accompany the nutrient artery and many smaller ones return the blood. It will be remembered that veins of bones have no valves.

In the foregoing, you are reminded that the

*Read before the 11th Annual Meeting of the Florida Railway Surgeons' Association, Pensacola, May 5, 1930.

tibia has an abundant blood supply especially in the upper end, which will be of considerable interest in the following case report.

On the morning of June the 23rd, 1929, I was called to see a negro man, age 52, who had been shot by his wife, as the outcome of an all-night family brawl. The weapon used was a 12-gauge full choke bore single-barrel shotgun loaded with No. 6 shot, and at a distance of 20 feet. The entire charge took effect in the upper end of the shaft of the tibia of the left leg near the juncture of the shaft with the head and on the internal surface between the attachments of the ligamentum patellae and the sartoris muscle. This part of the bone is covered by an aponeurosis derived from the tendon of the sartoris and by the gracilis and semitendinosus.

By some peculiar means, the skin had almost closed this wound, making it look something like a crescent-shaped cut. But the hole in the bone was circular in form and about the size of a dime. There was very little evidence of blood and the man seemed fairly comfortable. However, he was pretty well loaded with mean-smelling shine.

On examination, I found that the bone was not broken, but there was some tenderness around the knee and calf. After satisfying myself that this injury was sustained in the manner stated above, I decided to clean out this wound and ascertain just what damage had been done. The patient's bed was used as an operating table. The instruments used were among those carried in my emergency kit and consisted of a small bone curette, a probe and a large scalpel. A small bulb syringe with a glass barrel and a tourniquet were also used in connection with the operation, the tourniquet being applied just above the knee joint.

The patient was anesthetized by my son, who is a second-year pre-medical student.

Following the laws of asepsis and antiseptics as best I could under the circumstances, I proceeded to clean out the wound cavity. It was discovered, that as soon as the charge had penetrated through the compact layer of bone, it assumed a downward course. Therefore, a V-shaped notch was cut in the bone in the lower margin of the wound, care being taken to preserve the periosteum as best I could.

Through this opening, the bone wound was cleaned out, the contents consisting of shot, wadding, shreds of clothing, shattered bone substance and clotted blood.

After the cavity was thoroughly curetted, it reminded me of a wood pecker's nest in an old dead tree. It extended inward for about three-fourths of an inch and downward for about three inches from the upper and outer margin, and had a fluid capacity of one-half ounce. This wound was flushed several times with a one per cent chloramine T solution and sponged out, then the tourniquet was loosened, and rather to my surprise, the cavity instantly filled with blood.

The tourniquet was again applied and the blood sponged out and the wound loosely packed with gauze dipped in the chloramine T solution. On loosening the tourniquet this time, it was noted that blood ran through this packing freely. The wound was packed again, but very tightly this time, and a gauze compress bandaged over the entrance.

A tendency toward severe hemorrhage kept up for about 36 hours, then it gradually subsided and at the end of the fourth day it seemed that healthy granulations were fast forming.

As soon as the operation was finished, a 1,500 unit dose of tetanus antitoxin was given and a blood specimen taken for a Wassermann test, the result of which was reported positive plus 4.

The after treatment consisted in daily dressings of flushing the cavity with chloramine T solution and packing with gauze dipped in same. And there were three intravenous doses of neoarsphenamine, 0.6 grams each, given at weekly intervals. This probably did not rid his system of the old syphilitic infection, but very likely hastened the healing of the wound.

The rapidity with which this wound healed was beyond my expectations. Never was there a drop of pus noted, and the patient was discharged as well on July 28, 1929, just five weeks from date of being shot.

I called this negro to my office on April 27, 1930, for observation, a little over 10 months after being shot, and found that he was apparently in perfect health and there was no deformity of the tibia. Except for a slight depression, with a grayish scar, at the sight of entrance of the wound, about the size of a buffalo nickel, there was no evidence of this bone ever having been injured.

This man informed me that he is now chipping 10,000 turpentine boxes each week, which necessitates his walking several miles daily.

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BLOOD PRESSURE

The question of blood pressure has been agitated so frequently that one is apt to feel that undue prominence is given this symptom; however, both the American Medical Journal and the Southern Medical Journal have carried in recent numbers, editorials, based largely upon the findings of Alvarez and Stanley¹ in a study of 6,400 prisoners and guards. These findings agree so thoroughly with data obtained in examining more than 4,000 men of an average age of 39 years at the Veterans' Hospital, Lake City, that we can quite easily concur in the conclusions reached.

Another reason for reviewing the discussion is, that quite frequently patients with pressures between 100 mm. and 110 mm. state that they have been warned by their physicians that their pressure is extremely low for their age.

Alvarez and Stanley object to the old idea that a rising blood pressure is normal with advancing

years and place the limits of normal in adults between 90 mm. and 140 mm.

They further state that the arterial tension is not raised by dissipation, drugs nor syphilis. It is influenced by heredity, excitement, the day's work, body fat and temperature of the environment; but the most vital point in the study is, that if one has hypertension at 50, he probably had it at 20 years of age, and that 140 mm. is just as abnormal for one at 50 as it is at 20.

¹Alvarez, W. C., and Stanley, L. L.: Blood Pressure in Six Thousand Prisoners and Four Hundred Guards. A Statistical Analysis, Arch. Int. Med., 46:17, (July) 1920.

MALARIA

Most people feel that they know all there is to be known about malaria and are inclined to regard the matter in the same vein as the Florida dorky who was seen at a railroad station while having a chill. When asked if he was sick he replied, "No, sah, I isn't sick, I'se just chillin'." It is this attitude which to a large extent is responsible for the present prevalence of malaria.

In the 1929 report of the United Fruit Company, Dr. Deeks says "malaria still must be considered as the disease of outstanding economic importance in the tropics." The southern extremity of Florida lies just one-half degree north of the Tropic of Cancer and what is said of the tropics applies. Deeks further says that "due to improved camp sanitation and anti-malaria activities, there has been less sickness and the earning capacity of man has been increased. The average earning capacity per man per month resulting from the measures indicated are given as follows: 1927, \$30.79; 1928, \$38.61; 1929, \$40.80.

This is in a country where the rate of pay as a rule is lower for common labor than in the United States. At first labor was inclined to show an antagonism but this was gradually changed to a quizzical attitude and then to one of grateful contentment which led to recognition of the benefit of the sanitary measures."

According to Dr. Henry Hanson, State Health Officer, what has been said applies to the rural section of Florida and a campaign for the control and reduction of the malaria incidence in the state should have the whole-hearted support of the medical profession. Doctors will benefit from the improved health conditions among the farmers as it will bring about greater production due to increased earning capacity.

THE LOUISVILLE MEETING OF THE SOUTHERN MEDICAL ASSOCIATION

One of the best meetings in the history of the Southern Medical Association was in Louisville, Kentucky, in 1920. Now, after a lapse of ten years, the Jefferson County Medical Society, Louisville, is again host to the Southern Medical Association. Louisville is said to be "at the Crossroads of the Nation," accessible to, and easily reached from, all points in the South as well as in the Eastern, Central and Western states. Louisville is a great medical center, having early in the Nation's history taken its place as a seat of medical learning. There have gone out to the South from the medical schools of Louisville, now all merged into the School of Medicine, University of Louisville, perhaps more graduates than from any other medical center.

The program arrangement of the last several previous meetings, which has proved satisfactory to all, will be followed again this year. Tuesday and Wednesday, November 11 and 12, will be general clinical days, the program the first day being made up by members of the Louisville profession and the second day by physicians from outside the host city.

The opening clinics have been particularly well planned by physicians with the best facilities, to bring out the newer methods of diagnosis and therapy. Guests who arrive in time for the first of the Louisville clinics will feel amply repaid for their effort. For the clinics of the second day, the speakers will be brought together from the entire Southern territory, and from more Northern and Western points as well. The strictly clinical plan of presentation of patients and analysis of symptoms will be followed as far as possible. The wealth of clinical material in and near Louisville will furnish a varied background, for elucidation of the essayists' ideas and methods.

The scientific exhibits from year to year have shown increasing variety and merit. The technical exhibits this year are exceedingly full and varied. Careful inspection of their materials will show how faithfully and how quickly the supply houses respond to changing needs of the medical profession, and how frequently they may be leaders in improvement of technical methods.

The formal opening session with the addresses of welcome and response, featuring the address of the President, Dr. Hugh S. Cumming, Surgeon General, U. S. Public Health Service, will be held on Tuesday evening. The last general session

will be on Thursday evening, featuring the Oration on Surgery and Oration on Medicine, both presented by men of national reputation.

Wednesday evening has been set aside for alumni reunion dinners. Dinners will be arranged for all the schools having a sufficient number present to justify an individual dinner. The University of Louisville will make this a "home-coming" occasion, and expects to have hundreds of former Louisville graduates at its reunion and dinner.

The eighteen sections and conjoint meetings will hold their sessions on Thursday and Friday, meeting as usual in half-day sessions. The National Malaria Committee and the Southern Association of Anesthetists will meet conjointly with the Southern Medical Association as has been their usual custom, both presenting strong programs. The general session programs and the section programs are unusually strong this year. The section programs reflect the interests, inclinations, and educational needs of their officers, men in active practice throughout the Southern territory. From a scientific point of view, the Louisville meeting will be another outstanding success in the already illustrious history of the Association.

While the Southern Medical Association is strictly a scientific organization and its annual meetings are to stress things scientific, the social features are not omitted. There will be a President's reception and grand ball with Armistice Day setting on Tuesday evening, following the President's reception. There will be other social functions, with special entertainment for the visiting ladies. Louisville has one of the most active local Women's Auxiliaries in the United States, and its members plan to give the visiting ladies a royal good time. Mrs. George A. Hendon is General Chairman for Ladies' Entertainment and Mrs. John K. Freeman is President of the local Auxiliary.

There will be the usual golf tournaments for men and for the ladies and also the trap shooting tournament, there being permanent trophies to be contested for by both these groups.

Reduced round trip railroad rates are in effect from all points in the South as well as from Eastern, Central and Western states. Louisville is a railroad center reached by through sleepers from all parts of the country.

Louisville has modern hotels and all who wish to attend will be comfortably housed.

STATE NEWS ITEMS

Announcement has just been made of the marriage of Miss Maude Goode Coney of Jacksonville to Dr. Harold D. Van Schaick of Jacksonville. The ceremony took place at 5 o'clock, Wednesday afternoon, September 10th, at Atlantic Beach. The Rev. C. A. Ashby, rector of the Church of the Good Shepherd, performed the ceremony, after which an informal wedding supper was served. Later, Dr. and Mrs. Van Schaick left for an extended wedding trip in the North. They will make their home in the apartments at Stockton and Park Streets, Jacksonville.

* * *

Dr. Hugh West of Deland was a visitor at the Seminole County Medical Society meeting, September 12th. Dr. West gave a very interesting talk on spinal anesthesia as given at the Mayo Clinic.

* * *

Dr. and Mrs. M. A. Lischkoff of Pensacola are enjoying several weeks' vacation in and around New York. Dr. Lischkoff will remain to attend the meeting of the American College of Surgeons in Philadelphia before returning home.

* * *

Dr. Prescott LeBreton, a member of the Volusia County Medical Society, who has been spending some time in Buffalo, N. Y., is now in St. Petersburg doing orthopedic surgery. Dr. LeBreton's office will be in the American Legion Hospital for Crippled Children where he will hold state clinics.

* * *

Dr. L. M. Anderson of Lake City, while on a trip north, stopped off in Washington, D. C., and personally talked for Florida in connection with the branch of the National Soldiers' Home. Dr. Anderson was cordially received at headquarters and feels encouraged at the prospects for Florida.

* * *

Dr. J. C. Davis of Quincy, President of the Florida Medical Association, returned recently from a vacation spent in the mountains of North Carolina.

* * *

Your wife will be interested in the Woman's Auxiliary page. Be sure to call her attention to page 187 of this issue.

Dr. M. M. Andrews of Orlando has moved his offices to the Orange Clinic, on Lucerne Circle.

* * *

Dr. Ralph E. Stevens of Sanford was recently appointed as physician of the U. S. Veterans' Bureau with headquarters in Jacksonville. Major Stevens is commanding officer of the Medical Corps, 124th Infantry, Florida National Guard.

* * *

Dr. Sylvan McElroy has resumed his duties as health officer of Orlando after spending a month on the coast where he enjoyed a delightful vacation fishing.

* * *

The Executive Committee of the Florida Medical Association has designated May 12th and 13th, 1931, as the meeting dates for the Fifty-Eighth Annual Convention of the Florida Medical Association at Orlando.

* * *

Attending the Thirty-first Annual Meeting of the American Roentgen Ray Society in West Baden, September 22-26, from Florida were: Dr. W. McL. Shaw, Jacksonville; Dr. Bundy Allen, Tampa; Dr. Brown Farrior, Tampa; and Dr. Gerard Raap, Miami.

* * *

Dr. C. J. Marshall has opened offices in the Exchange Building, Orlando.

* * *

Dr. and Mrs. Ferdinand Richards and Dr. and Mrs. E. C. Swift of Jacksonville enjoyed a visit and fishing trip at Port St. Joe recently.

* * *

Dr. Nonie Wilson Gable of St. Petersburg recently changed office location and Dr. Gable's present address is Health Department, 175 Fifth Street, North.

* * *

Dr. and Mrs. I. F. Bean of Melbourne made a trip recently to Baltimore, Winchester, Va., and Tate Springs, Tenn.

* * *

Dr. and Mrs. Joseph H. Lucinian of Miami announce the birth of a son on September 16, 1930, at Victoria Hospital.

* * *

Dr. Raymond Sanderson of Jacksonville has recently returned from Brooks Field, San Antonio, Texas, where he has been for the last

month attending the flight surgeons' training school, bringing with him his diploma testifying that he has finished the course. Dr. Sanderson now has the rank of lieutenant-colonel in the United States Army Reserve.

* * *

Dr. G. E. Osgood has returned to St. Petersburg after a year's illness in Washington, D. C.

* * *

Dr. and Mrs. J. N. Tolar of Sanford have just returned from a vacation spent in Maine and other points North. Their son, Ralph, will return later.

* * *

Dr. W. M. Rowlett of Tampa has returned after spending six weeks attending clinics in Boston and New York.

* * *

Dr. J. R. Chappell of Orlando is making quite an extended trip in the North. He planned to witness some interesting baseball games during the World Series.

* * *

Dr. and Mrs. George M. Mitchell of Jacksonville returned recently from quite an extended trip, including New York City.

* * *

Dr. H. B. Fisk of St. Petersburg has entered the Veterans' Bureau Service and will report for duty at New Orleans at once.

* * *

Dr. C. C. Webb of Pensacola recently attended clinics in Baltimore and New York City. Dr. Webb also visited his former home in Columbus, Ohio, before returning to Pensacola.

* * *

Dr. and Mrs. George W. Wood of Rockledge spent their vacation at Miami Beach recently.

* * *

Dr. and Mrs. H. Quillian Jones of Ft. Myers announce the birth of an 8¼ pound girl, Dorothy Louise Jones, on September 24, 1930.

* * *

Dr. William P. Stull of Jacksonville was recently appointed to the medical staff of the Duval County Hospital.

* * *

The Hillsboro County Medical Society is co-operating with the Y. W. C. A. in Tampa by arranging lectures through the winter season. Dr. Harry Evans of Tampa delivered the first lecture.

Dr. Grady H. Brantley of Lake Worth has returned from a short sojourn at Indian Springs, Georgia.

* * *

Dr. Ernest Milam, president of the Jacksonville Kiwanis Club, represented his club at the annual district convention in Orlando, recently.

* * *

Dr. George A. Dame and Dr. Leland H. Dame of Inverness have recently made many improvements in their clinic located in the large residence building at the corner of Main and Seminole Streets. Dr. Leland Dame recently completed several weeks of post-graduate work in diseases and operations of the eye, ear, nose and throat and Dr. George Dame also completed post-graduate work in diseases of children and babies.

* * *

Dr. A. W. Knox of Sanford recently made an extended trip through Canada.

* * *

Dr. and Mrs. A. K. Wilson of Jacksonville recently visited in North Carolina.

* * *

Dr. A. M. Bidwell of Tampa spent two weeks recently visiting surgical clinics in Baltimore and New York City.

* * *

Dr. Paul H. Martin of Jacksonville recently visited in Savannah, Georgia.

* * *

Dr. C. J. Heinberg of Pensacola attended the American Academy of Ophthalmology and Otolaryngology in Chicago recently.

* * *

Dr. and Mrs. Herrman Harris of Jacksonville returned recently by motor from Poughkeepsie, New York, after an interesting trip.

* * *

Dr. Frank Gray and family have returned to their home in Orlando after spending a month at Daytona Beach.

* * *

Dr. R. E. Stevens, formerly of Sanford, recently returned from a trip to Philadelphia, New York City, Wilkes-Barre, Pa., and other points of interest.

Dr. and Mrs. Jerome Knauer of Jacksonville have returned home after a three weeks' visit to New York and Long Island.

* * *

Dr. and Mrs. Louis Orr of Orlando are spending the month of October touring Old Mexico.

* * *

Dr. H. F. Watt of Ocala recently made a trip to Jacksonville by motor.

* * *

Dr. and Mrs. Russell H. Dean of Jacksonville have returned home after an extended trip to Baltimore through the Shenandoah Valley. They also visited in Waynesville, N. C., en route.

HENRY K. DuBOIS

Dr. Henry K. DuBois of Port Orange died September 9th at his home. Dr. DuBois was one of the four doctors elected to honorary membership at the Pensacola meeting of the Florida Medical Association.

SAMUEL GAINES WORLEY

The death of Doctor Samuel Gaines Worley of St. Augustine, Florida, September 8, 1930, removes one of the older physicians of the state from the roll of membership of the Florida Medical Association. Dr. Worley was born in Tennessee January 18th, 1856. His early studies were obtained in the rural schools of the districts in which he lived. His medical education consisted in studies at Tulane University, New Orleans, Louisiana, and the Atlanta Medical College, Atlanta, Georgia. He graduated at the latter college in 1882. He practiced his profession in Louisiana, Tennessee, West Virginia, Georgia, Texas and Florida. He located in Florida at Kissimmee in 1883 where he lived seven years. In 1890 he located at St. Augustine where he was employed by the Florida East Coast Railway. Here he organized a hospital and training school for nurses as chief surgeon for Florida East Coast Railway which position he held until 1914 when he organized a private hospital at St. Augustine. He operated this hospital until 1923 when he retired from active practice.

He was quiet, gentle and kind. The Florida Medical Association feels the loss of Doctor Worley and prints this memorial to his memory.

A copy of the following letter has been received in the editorial office. It so aptly expresses the Editor's feelings that it is deemed worthy of publication:

"The Editor,
Jacksonville Journal,
Jacksonville, Fla.

DEAR SIR:

In recent issues of your valuable journal you have carried in prominent parts, notices of the arrest and conviction of a Jacksonville physician, in the courts of Georgia for criminal offense. The name of this party as given in your paper, is Dr. Grenoble. This is not the first time that your paper has given wide publicity to criminal acts of alleged physicians.

To do justice to the medical profession I should think you would at least ascertain that the party in question is a member of the medical profession. After a thorough search through the latest registrar of practitioners of medicine in Florida and in the directory of the American Medical Association, there is no physician registered by the name of Dr. Grenoble.

Furthermore, I would call your attention, that according to the interpretation of the modern dictionary the use of the word doctor, or physician means one who is practicing medicine. Despite that fact, practitioners of various types of healing, with little or no educational attainments, call themselves doctors or physicians."

MEETING OF THE FLORIDA EAST COAST MEDICAL ASSOCIATION

The fourth meeting of the Florida East Coast Medical Association was held at Melbourne on October 2nd and 3rd, with Dr. Roy J. Holmes, of Miami, presiding, and Dr. I. M. Hay, of Melbourne, as secretary. The meeting was well attended, seventy doctors registering.

The scientific program was an excellent one and a more than usual interest was shown in the reception of the papers read, by those attending.

Dr. Hay and the members of Brevard County Medical Society are to be congratulated upon the success of the meeting, and upon the class of entertainment furnished the attending doctors and their wives. In passing, thanks should be rendered Mr. Fielding, the proprietor of the Hotel Melbourne, and Drs. George J. Kappler, of West Palm Beach, and John D. Milton, of Miami, for

the musical program furnished during the banquet. The vocal cords of both doctors are in strong condition, and if their voices at times were rather discordant, it may be attributed to slight colds contracted by these gentlemen during their frequent visits to the entertainment room on the second floor of the hotel.

The ladies were entertained by the wives of the local physicians, and from all reports available, claim to have had an excellent time.

Dr. Calvin D. Christ, of Orlando, appeared to be having a very delightful time, especially out at the Country Club at the dance. Several of the ladies said he was as light on his feet as if he weighed one hundred pounds, and was twenty years of age. When told that, Dr. Christ said that was just about as old as he felt.

Dr. J. Ralston Wells, of Daytona Beach, was elected president for the coming year; Dr. I. M. Hay, of Melbourne, first vice-president; Dr. Edward Jelks, of Jacksonville, second vice-president, and Dr. Edwin C. Swift, of Jacksonville, secretary. Jacksonville was selected as the next meeting place.

In order to stimulate attendance until the end of each meeting, it was voted to assess each member registering at future meetings, fifty cents in addition to the registration fees, which hereafter will not exceed two and one-half dollars, and that this shall be held as a "pot," to be drawn for toward the end of the meetings. Each one registering will be given a card with a number, and a duplicate number will be placed in a hat at the time of the drawing. The first number drawn will receive two-thirds of the amount of the "pot," and the second number, the remaining third. If the numbers drawn are held by members who have left prior to the drawing, they will receive nothing, and a second number, or numbers, will be drawn. In order to win, one must be present when the numbers are selected. Assuming that one hundred and fifty are present at the Jacksonville meeting, it is readily seen that the winning numbers will warrant the boys in remaining until the end of the session.

FIFTY-EIGHTH ANNUAL MEETING
OF THE FLORIDA MEDICAL ASSOCIATION,
ORLANDO, MAY 12, 13, 1931.

THE WOMAN'S AUXILIARY PAGE

WOMAN'S AUXILIARY
TO THE
FLORIDA MEDICAL ASSOCIATION, INC.

State Editor
MRS. EDWARD JELKS,
2244 St. Johns Avenue
Jacksonville

OFFICERS

Mrs. J. RALSTON WELLS, President	Daytona Beach
Mrs. S. E. DRISKELL, President-elect	Jacksonville
Mrs. W. G. POST, JR., Vice-President	St. Petersburg
Mrs. J. M. IRWIN, Historian	St. Augustine
Mrs. J. E. TAYLOR, Secy.-Treas.	DeLand

September brought the return of most of the summer vacationists; October finds them settled down to their regular routine; and also busily engaged in outlining plans of work for the coming year. To this end, Mrs. Wells, State President, called a meeting of the Executive Board at Melbourne, October 2-3; at which time the Florida East Coast Medical Society met in that place. Mrs. Wells is, this month, sending out the following circular letter to all county Auxiliary presidents:

"With the coming month, our organization, by its component groups, enters upon its period of active work. I hope I may have your active co-operation in making this a successful year.

Since I assumed office in May at the close of our business year, the past summer months have been used, necessarily, to familiarize myself with the work and to plan for the future. However, I must call attention to an outstanding feature, which was inaugurated immediately after the Pensacola convention—a woman's Auxiliary Page in the Florida Medical Journal. If you have not already discovered it, let me urge you to look for it each month, and to search in your files for the past numbers. It is the aim of the Editor, Mrs. Edward Jelks, to publish something of interest along Auxiliary lines each month, and again I ask your cooperation by sending in items of interest from your Auxiliary.

Attendance at the convention of the Woman's Auxiliary to the American Medical Association at Detroit in June was a source of great inspiration to me. I cannot urge too strongly that you and your members make every effort to attend a national convention. An immediate opportunity

presents itself in the convention of the Auxiliary to the Southern Medical Association which meets in Louisville, November 11-14. The State is entitled to two delegates and two alternates and as many visitors as care to go. The delegates and alternates will be appointed at a meeting of the Executive Board to be held in Melbourne, October 2-3. Any suggested names of members who might attend will be welcome.

There is such urgent need for increased membership in our organization that I wish I might have a pledge from each Auxiliary to organize one new Auxiliary in some nearby county which has not been interested so far. You may count on my presence and assistance where possible.

Please send in to the State Secretary-Treasurer, Mrs. J. E. Taylor, DeLand, a correct list of your Auxiliary officers, that we may keep our records up-to-date.

I shall hope to hear from you from time to time about your work and shall welcome suggestions. If I can be of help to you at any time, in any way, I am at your service.

With best wishes for a successful Auxiliary year, I am Very sincerely yours,

MRS. J. RALSTON WELLS.

* * *

HYGEIA.

On September 5, Mrs. Herrman Harris, State Chairman of Hygeia, sent out her first bulletin to the Presidents and Hygeia Chairmen of the County Auxiliaries. Her program for 1930-1931 is as follows: To put the magazine, "Hygeia", wherever it may do the most good; for example, schools, libraries, clubs, public reading places. The means by which this may be accomplished is left to the discretion of each individual Auxiliary, but she suggests that the subscription be donated by the Auxiliary or their Medical society or by individuals, by benefits, or by the Board of Education in the case of schools.

As a new feature this year, Mrs. Harris is requesting each Auxiliary to have at least one health program during the year. If possible to have more than one such talk, so much the better.

Finally, she urges each Hygeia Chairman to outline her work early, formulate her program for the ensuing year, and to pursue her work with lots of enthusiasm.

COUNTY SOCIETY	SECRETARY	MEETINGS				Dues Paid.
		Date	Time	Place	Luncheon?	
Alachua	J. E. Maines, Jr., M.D., Gainesville.	2nd Tuesday	12:00 Noon	White House	Yes.	88%
Bay	Don S. Fraser, M.D., Panama City.					50%
Brevard	I. K. Hicks, M.D., Melbourne.	3rd Tuesday		Varies		91%
Broward	Ralph Lingeman, M.D., Ft. Lauderdale.	2nd Tuesday	8:00 P.M.	Chamber of Com- merce	No.	86%
Columbia	T. H. Bates, M.D., Lake City.	1st Monday.	7:30 P.M.	Blanche Hotel		73%
Dade	E. N. McKenzie, M.D., Miami.	1st Friday	8:30 P.M.	Club Room, Huntington Bldg.	Occasionally.	86%
DeSoto-Hardee- Highlands ...	H. V. Weems, M.D., Sebring.		8:00 P.M.	Varies	Yes.	93%
Duval	Kenneth A. Morris, M.D., Jacksonville.	1st Tuesday	8:15 P.M.	Chamber of Com- merce Building	No.	84%
Escambia	J. M. Hoffman, M.D., Pensacola.	1st Tuesday	8:00 P.M.	Board of Health Building	No.	89%
Hamilton	J. R. Bruce, M.D., Jasper.					100%
Hillsboro	J. T. Cowart, M.D., Tampa.	1st and 3rd Tues- days	8:00 P.M.	Tampa Municipal Hospital	No.	84%
Jackson	C. H. Harrison, M.D., Cottondale.	2nd Tuesday	3:00 P.M.	Marianna	No.	69%
Lake	W. L. Ashton, M.D., Umatilla.	1st Thursday	12:30 P.M.	Eustis	Yes	100%
Lee	H. Quillian Jones, M.D., Ft. Myers.	3rd Friday	7:30 P.M.	Lee Memorial Hospital	No.	83%
Leon-Gadsden- Liberty- Wakulla- Jefferson	J. B. Brinson, Jr., M.D., Monticello.	Quarterly	3:00 P.M.	Varies	Yes.	86%
Madison	Geo. O. Davis, M.D., Madison.					
Manatee	A. Q. English, M.D., Manatee.	1st and 3rd Tues. Oct. to May; 2nd Tues. May to Oct.	7:00 P.M.	Dixie Grande Hotel	Yes.	92%
Marion	Thos. H. Wallis, M.D., Ocala.	3rd Thursday	12:30 P.M.	Marion Hotel	Yes.	91%
Monroe	W. R. Warren, M.D., Key West.	1st Sunday	9:00 P.M.	Varies	Yes.	
Orange	J. R. Chappell, M.D., Orlando.	3rd Wednesday	8:30 P.M.	Varies	No.	81%
Palm Beach ...	R. G. Lewis, M.D., W. Palm Beach.	2nd Monday	8:00 P.M.	Court House	Yes.	77%
Pasco- Hernando- Citrus	Geo. R. Creekmore, M. D., Brooksville.	2nd Thursday	7:00 P.M.	Varies	Yes.	87%
Pinellas	O. O. Feaster, M.D., St. Petersburg.	Every other Friday	8:00 P.M.	500 Power & Light Bldg.	No.	81%
Polk	Herman Watson, M.D., Lakeland.	2nd Wednesday in Feb., Apr., June, Aug., Oct., Dec.	1:00 P.M.	Lakeland	Yes.	95%
Putnam	E. W. Warren, M.D., Palatka.	2nd Thursday	7:00 P.M.	James Hotel, Palatka	Yes.	64%
St. Johns	A. C. Walkup, M.D., St. Augustine.	3rd Tuesday	8:30 P.M.	Varies	Yes.	86%
St. Lucie-Okeech- bee-Indian River-Martin ..	C. L. Davis, M.D., Okeechobee.	3rd Thursday	8:00 P.M.	Varies	Yes.	100%
Sarasota	F. C. Metzger, M.D., Sarasota.	2nd Tuesday	8:30 P.M.	Varies	Occasionally.	75%
Seminole	J. T. Denton, M.D., Sanford.	2nd Friday	8:00 P.M.	City Hospital		100%
Sumter	W. E. Mitchell, M.D., Coleman.	2nd Tuesday		Varies	No.	100%
Suwannee	W. C. White, M.D., Live Oak.					67%
Taylor	R. J. Greene, M.D., Perry.	Last Thursday	12:15 P.M.	Eldorado Cafe	Yes.	60%
Volusia	J. Ralston Wells, M.D., Daytona Beach.	2nd Tuesday	7:30 P.M.	Varies	Yes.	87%
Walton- Okaloosa	A. G. Williams, M.D., Lakewood.	3rd Thursday	8:00 P.M.	Varies	Occasionally.	100%
Washington- Holmes	H. A. McClure, M.D., Chipley.					56%

NOTE—Secretaries: Please submit information to complete the above schedule.

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TUBERCULOSIS ABSTRACTS

A REVIEW FOR PHYSICIANS

ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

THAT CHILDREN may have a latent form of tuberculosis is a novel and disturbing thought to most parents and teachers. The growing appreciation of the significance of childhood type of tuberculosis is creating a demand that something be done to prevent the latent form of the disease from progressing. Some are urging the development of preventoria. But there is considerable confusion in the public mind, as well as among the profession, as to what a preventorium is and what purpose it is supposed to serve. The following is a résumé of a recent article attempting to clarify the subject.

WHAT IS A PREVENTORIUM?

The term "preventorium" was first used to designate a convalescent home for adults (Brehmer's Rest at Ste. Agathe des Monts in Canada) on the ground that any depleting illness may predispose to tuberculosis and that after-care tended to prevent tuberculosis.

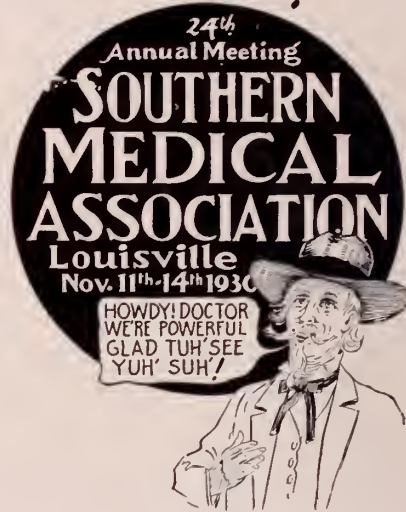
In 1909, New York City, through the interest of Dr. Alfred Hess, established at Farmingdale, N. J., an institution to take care of "pre-tuberculous" children. It was called a preventorium. Unlike the Canadian institution, which was designed for convalescent adults, that at Farmingdale was exclusively for children presumably threatened with tuberculosis. Similar institutions sprang up, though practices and procedures were not uniform.

Ideas as to what the preventorium was supposed to be and do were vague. However, the dominating purpose of all was a desire to provide care for the sick child. The term, "pre-tuberculous," was applied rather loosely to the child with actual tuberculosis, the child of a tuberculous household, and the child below par in health, as expressed usually in malnutrition, but all were regarded as sick children.

Quite another development in these early days was the establishment of fresh air schools and open window rooms. Their purpose was to increase the resistance of certain selected persons, who were not sick but who were presumed to be potential victims of tuberculosis. The emphasis was on health building rather than on disease prevention.

(Continued on page 192)

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it's
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this year!



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As we learned to differentiate between infection, mass infection, and actual disease, and as it became evident that the beneficial results of both preventoria and fresh air schools were to be attributed to rest, good nutrition, and a well-regulated regimen, the procedures and objectives of both types of institutions tended to merge. For that reason, it is today impossible to answer statistically how many preventoria and fresh air schools there are in the United States.

Three years ago, the Committee on Preventoria of the National Tuberculosis Association formulated this definition: "A preventorium is a twenty-four hour, twelve months institution for the care and observation of children substandard in health." The general purpose of this institution was assumed to be giving preventive care to children threatened with tuberculosis, heart disease, or other potential disability. Exact standards of eligibility were not defined but the Committee indicated the groups from which selections for the preventorium might be made, as follows:

1. Children exposed to tuberculosis at home, or in whose immediate family there has been a recent death from tuberculosis.

2. Children who have had tuberculosis, whose lesions are not active, and who appear to be in need of further care and observation.

3. Children suffering from malnutrition.

4. Children who tire easily and who are unable to carry on their class work.

5. Children frequently absent because of colds, bronchitis, etc.

6. Children suffering from rheumatic heart disease (of certain classifications).

It is now recognized that many children who need protective care do not require the exacting regimen furnished by a twenty-four hour, highly specialized preventorium. Some preventoria assume complete charge of their children, keeping them for twenty-four hours of the day the year round until they have apparently developed good resistance, while others permit their charges to return home over the week-end. The predominating purpose of these institutions is to give medical care, and secondly to provide school instruction. Another type of preventorium is essentially a school which cares for the children only during school hours and which furnishes supplementary meals, rest periods during the day, etc., while in the meantime conditions in the children's

(Continued on page 194)

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	Grams	Prot.	Fat	Carb.	Cal.
1 tablespoon Knox Sparkling Gelatine	7	6
1½ cup cold water
1½ cups boiling water . . . . .	....	....	....	....	....
¼ cup lemon juice or 1½ teaspoons citric acid	40	....	....	4	....
Grated rind of one lemon . . . . .	....	....	....	....	....
1½ grains saccharin . . . . .	....	....	....	....	....
6 sections orange	75	1	....	9	....
6 sections grapefruit	90	.5	....	9	....
Total	7.5	....	22	118	....
One serving	1	....	4	20	....

Soak gelatine in cold water five minutes. Boil water and rind for two minutes. Add to gelatine and stir until dissolved. Add lemon flavoring and saccharin, strain and chill. Cut each section of fruit into three pieces. When jelly is nearly set, stir in cut fruit, mold, chill until firm and serve plain, with thin cream or whipped cream.

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There is such a great difference in gelatines that it is very necessary to designate the kind of gelatine.

For example, our attention has just been called to a case for which a physician prescribed "gelatine" in the diet of a diabetic. When indications of acid developed it was learned that the patient had unwittingly been using a ready-flavored jelly powder containing about 85% sugar, 2% acid-flavoring, 12% gelatine and coloring matter.

To guard against such errors, it is a wise precaution to stipulate Knox Gelatine and especially to call the patient's attention to the importance of the name "Knox."

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homes are scrutinized and supervised by a special follow-up worker.

While preventoria, fresh air schools, open window classrooms, nutrition classes, and health camps vary widely in their procedures, the main purpose of all seems to be to give handicapped children an extra lift so as to prevent the threatened disaster of pulmonary tuberculosis in later years. Opinion in the main seems to be that children with the childhood type of tuberculosis (unless progressive) should not be regarded as sick children but rather as being threatened with disease. Certainly, children with the adult type of pulmonary tuberculosis should not be in the preventorium, not only because they are definitely ill, but also because they are potential spreaders of the disease.

There would be less confusion of thought about preventoria were discussions concerned not so much with building construction, physical equipment, staff, etc., but with the therapeutic requirements of children who need protective care. Indications for treatment of such children are:

1. Contact with the tuberculous adult, who presumably has infected the child, must be broken. This is done by removing the tuberculous adult to a sanatorium, by taking the child out of the home, or by teaching every member of the household the principles underlying the transmission of tuberculosis.

2. The child must be relieved of all possible strain; *i. e.*, strenuous exercise and burdensome school work. Rest is the cornerstone on which preventorium care is based.

3. The child's health must be built up; physical defects must be corrected and the benefits of good food, sunshine, and fresh air must be made available.

4. The psychology of the child must be adjusted so that he will not think of himself as being inferior to others gifted with greater reserve of physique, and yet restrain over-ambitious impulses.

These indications for treatment can, under ordinary circumstances, be met without the aid of a definite institution, but there are, of course, numerous "problem families," as the social worker calls them, where it is impossible to meet the requirements enumerated above. These problem families are not limited to the poor or ignorant, but include many families of intelligence and of means, who, for any reason, are unable to afford the child the necessary protection.

(Continued on page 196)



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DR. ALBERT F. BRAWNER, Resident Physician.

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are carefully following their pupils into adult life in order to learn what their subsequent experiences may be. When enough of such data have been collected, we may be able to determine more precisely what the ideal form of organized care may be.—*What Is a Preventorium?* H. E. Kleinschmidt, *Jour. of Pub. Health*, July, 1930.

(This review secured by the Florida Public Health Association from the National Tuberculosis Association).

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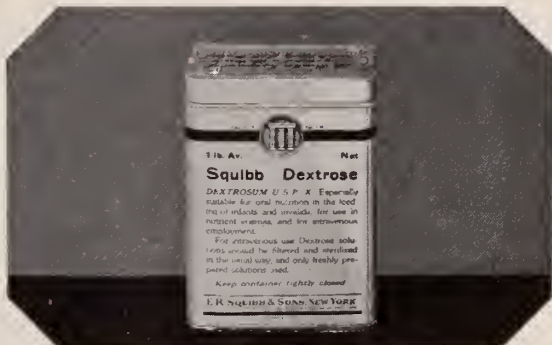


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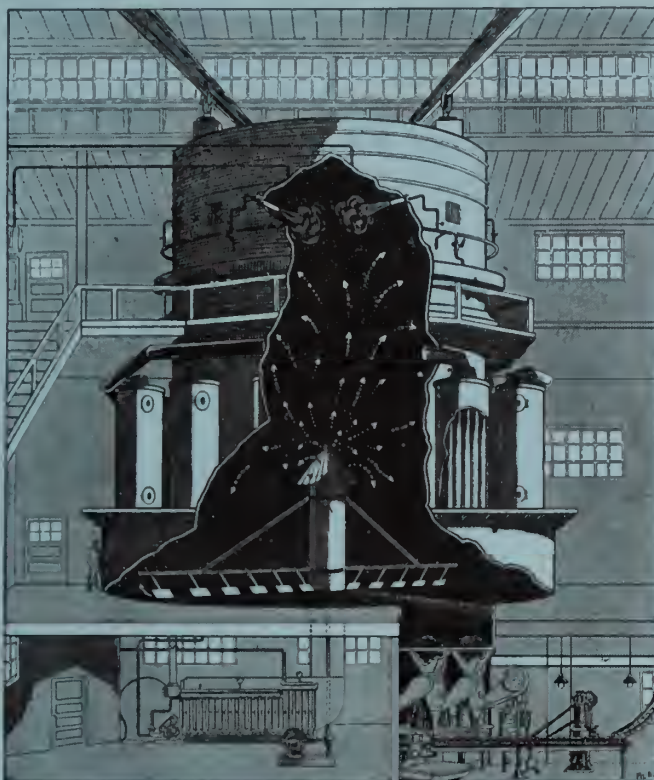
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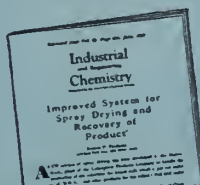
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VOLUME XVII
NO. 5

Jacksonville, Florida, November, 1930

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SPINACH SALAD (Six Servings)

	Grains	Prot.	Fat	Carb.	Cal.
1½ tablespoons Knox Sparkling Gelatine.....	10	9
½ cup cold water.....	....	....	....	....	....
1¼ cups boiling water.....	....	....	....	....	....
2 tablespoons lemon juice.....	20	....	....	2	....
½ teaspoon salt.....	....	....	....	....	....
1½ cups cooked spinach, chopped.....	300	6	....	7	....
2 hard cooked eggs.....	100	13	10.5	....	....
Total.....	28	10.5	9	242.5	
One serving.....	5	2	1.5	40	

Soak gelatine in cold water and dissolve in boiling water. Add lemon juice, salt, strain and chill. When nearly set, stir in chopped spinach, mold and chill until firm. Serve on lettuce hearts or tender chicory leaves and garnish with hard cooked egg, cut lengthwise in sixths and sprinkled with paprika. Serve with mayonnaise.

RECIPES LIKE THESE HELP DIABETIC PATIENTS KEEP THEIR DIETS AND THEIR APPETITES

WINTER SALAD (Six Servings)

	Grains	Prot.	Fat	Carb.	Cal.
2 teaspoons Knox Sparkling Gelatine.....	4.5	4	....	....	....
½ cup cold water.....	....	....	....	....	....
½ cup hot water.....	....	....	....	....	....
½ teaspoon salt.....	....	....	....	....	....
½ cup vinegar.....	....	....	....	....	....
1½ cups grated cheese.....	150	43	54	....	....
½ cup chopped stuffed olives.....	70	1	19	8	....
½ cup chopped celery.....	60	1	....	2	....
½ cup chopped green pepper.....	25	....	....	1	....
½ cup cream, whipped.....	75	2	30	2	....
Total.....	51	103	13	1183	
One serving.....	8.5	17	2	197	

Soak gelatine in cold water. Bring hot water and salt to boil and dissolve gelatine in it. Add vinegar and set aside to chill. When nearly set, beat until frothy, fold in cheese, olives, celery, pepper and whipped cream. Turn into molds and chill until firm. Unmold on lettuce leaf and serve.

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See Description, Journal A. M. A.
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PUBLISHED MONTHLY

Volume XVII

Jacksonville, Florida, November, 1930

Number 5

LUETIC HEART DISEASE*

HERBERT CALDWELL, M.D.,
Lake City.

Scientific investigation of this subject was only begun very recently. Ricord, in 1845, made observations on gummatous myocarditis. From 1890, more exact studies have been made. At first, in addition to changes in the aorta, two groups of cases were recognized, syphilitic inflammation of the coronary arteries, and sclerous myocarditis of syphilitic origin.

Researches made in hereditary syphilis show that all the structures of the heart may be involved, the nourishing vessels, the myocardium, less often the pericardium and the endocardium. First, the coronaries are frequently affected, the periarterial changes, step by step, reaching the myocardium. The lesions by preference are at the very beginning of the coronaries. Next the fine arterioles become involved, infiltration follows with gummatous formation; sometimes obliteration of the vessels occurs with later the stage of sclerosis. Small aneurysms and interstitial hemorrhages may follow.

In acquired syphilis, the process nearly always depends on vascular changes.

Lesions of the myocardium. Gumma are circumscribed lesions, varying in size from pea to walnut, associated with vascular changes. Fibrous reaction around the periphery tend toward sclerosis or softening with ulcerations and may be followed by partial aneurysms; preferably located in the substance of the ventricles, especially the left, or the interventricular septum, here causing various disorders of the cardiac rhythm (best known as Stokes-Adams syndrome); or cardio pericardial adhesions may develop.

Infarction. Necrotic areas are frequent in syphilis, typical or invaded secondarily by hemorrhagic effusion. In the center there is marked degeneration of the muscle fibres.

The Plaque. The plaque of sclerosis is at first soft, then hard; represents the last stage of either of the changes mentioned; a genuine cicatrix. It may be the starting point of a cardiac aneurysm.

Diffuse lesions, myocarditis or sclerosis. We

have first infiltration, then connective tissue fibres appear and the process terminates in organized connective tissue.

The Aorta. Syphilis may attack the aorta either locally or generally. The ascending portion usually suffers most. A strangulation necrosis takes place, caused by periarteritis and obliterating endarteritis of the vasa vasorum, which starves and destroys the elastic layer. If violent, the condition travels as a serpiginous ulcer; causes aneurysms and vegetative growths on the intima which may break off and form emboli.

The X-ray shows changes in the pulsations, size and contour of the aortic shadow. Frequently the shadow is cone shaped with the base on the heart. Occasionally, fusiform shadows are seen. A transverse shadow of more than 6 cm. is usually abnormal, while a heart diameter of more than 50 per cent of the chest should be considered as enlarged.

Dilatation of the aortic ring from aneurysm of the first portion of the aorta is nearly always due to syphilitic atheroma of the aortic walls, and in such a case it will be probable that there is syphilitic disease of the aortic valves. It will be impossible to say how much of the regurgitation is due to the dilatation of the ring, and how much is due to the attendant valve changes.

One usually can differentiate this condition from aortic enlargement caused by hypertensive heart disease, arteriosclerosis or an unusually high diaphragm. In hypertension, there is usually diffuse enlargement of the entire aorta. In arteriosclerosis it is tortuous rather than dilated and the aortic knob is prominent and not flattened as in syphilis. In a high diaphragm, the aorta may be slightly tortuous but the cause will be apparent.

Syphilitic heart disease occurs most often in males who have worked hard and their first symptoms are brought on by some undue muscular effort which strains the enlarged heart, or even bursts an atheromatous patch in the diseased valve.

Symptoms and Clinical Course. Aortic insufficiency is the most common valvular lesion, unaccompanied by stenosis. Thayer says that he has only seen one case of aortic stenosis which he knew to be due to syphilis; also it is known that

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aortic insufficiency of rheumatic origin is nearly always accompanied by a mitral defect.

Paroxysms of dyspnea are common with syphilitic aortitis. Pain is common with syphilis and rare with endocarditis. Most show symptoms of heart failure with congestion. Normal rhythm is the rule. Another group show loss of cardiac reserve but with not enough damage to cause venous stasis; they show breathlessness on slight exertion, precordial pain, palpitation, giddiness, fatigue and undue exhaustion. A third smaller group show pain of anginal character and distribution. A small group show hypertension with albumen and casts.

The aortic arch is dilated in many cases of syphilitic aortic regurgitation, but aortic widening may be absent. Those with aortic dilatation and hypertension tend to fall into the anginal group.

Physical signs. May be those of congestive heart failure alone. Aortic insufficiency with varying degrees of murmur present, and Corrigan pulse. Aortic dilatation causes visible pulsations in the second or third interspace to the right and left of the sternum; and submanubrial dullness. A normal rhythm is usual. Auricular fibrillation may occur in a few; extra systoles are rather common.

Incidence. A careful study of fifty cases of early syphilis at the Massachusetts Hospital showed no definite clinical evidence of disease of the heart nor aorta in any case. Clinical evidence of cardio vascular disease in early syphilis is rare.

In a study by Smith and Kimborough of about fifty cases of syphilitic heart disease, the average interval in cases in which the date of the initial lesion was known was 22 years—the shortest interval was 8 years—the longest 41 years.

Thayer says that the syphilitic heart usually progresses to dissolution very quickly after leaving the latent stage, and Preble adds to this, especially with strenuous treatment.

French says that the luetic heart is uncommon at 40; is met with between 40 and 50; in many cases the heart has been passed as normal at 40, while at 45 the aortic regurgitation is extreme.

Treatment. Preble says: "Syphilis of the aorta should not receive active treatment. The purpose of treatment is to have as much scar tissue as possible, not to remove the syphilitic exudate rapidly. Prolonged use of small doses of iodide of potassium should be the plan. Active treatment too often leads to aneurysm."

Most writers deplore the indiscriminate use of intensive antiluetic therapy. In congestive failure or where the cardiac reserve is low, most agree that medication should be started in small doses and developed gradually.

CASE REPORT

P. R. D., age 53, white male, fairly well nourished, seen first in November, 1929. Very little sickness in his entire life and had raised a healthy family. Had attacks of gastritis in 1927. For some days previous to my first visit he had attacks of pain in the left abdomen radiating upward toward the heart, accompanied by the formation of gas and constipation. His appetite was erratic. Pulse 120 standing, 112 sitting, 100 recumbent. Blood pressure 160 mm. systolic, 60 mm. diastolic. Arteries only slightly thickened. Corrigan pulse marked. Impulse in the sixth interspace 10 cm. to the left of the mid-sternal line. No thrill felt. There was a marked double murmur at the base which was heard all over the precordium, the diastolic murmur being transmitted to the left axilla.

The electrocardiograph showed a marked left deviation—plus 52. A rate of 90, but no definite myocardial degeneration.

The X-ray showed the heart very much enlarged; the knob prominent and enlarged; heart 19 cm.; arch 9 cm.; media stinal shadows $11\frac{1}{2}$ cm.; a heart something over 64 per cent of the chest, it being 29.5 cm. There was no evidence of passive congestion of the lungs. A G. I. Series showed no definite trouble in the stomach or intestines. A blood test showed a 4 plus Wassermann.

When this case was first seen, a diagnosis of rheumatic heart disease was made which, of course, was an error. When the X-ray and the result of the blood test were obtained and the case re-examined, that error was corrected and a diagnosis of luetic heart disease was made. This error is the main reason for reporting this case. It is true there was a rather marked systolic murmur present which at first was interpreted as a mitral murmur, but this case had been seen almost yearly by different medical men and no diagnosis of heart disease had been made. This can only be explained in the absence of any acute illness by the last diagnosis made.

He was seen in one night attack of coughing, rapid pulse, slight dyspnea. He had had a number of these attacks. His pulse was about 200. After the administration of ammonium bromide grs.

10 by mouth, repeated every 15 minutes, the pulse began to slow and in about one hour was about 90 per minute which was considered normal.

Before this was considered luetic, the patient's activity was restricted and rest hours prescribed. From the first, he showed improvement. To this was added cacodylate of soda grs. iii, intravenously three times weekly, together with biniodide of mercury $\frac{1}{4}$ grain t. i. d. after meals, later changed to iodide of potassium minims 10 t. i. d. His condition has continued to improve until he says he feels better than he has for years. His appetite is good, he has gained weight, sleeps and rests well. The murmur has decreased greatly and the pulsations of the vessels of the neck and the force of the cardiac impulse have both lessened. His color has improved and he has had no further attacks of pain.

In spite of this improvement, X-rays taken six weeks after the beginning of antiluetic treatment do not show any decided lessening of the heart and aortic shadows. Perhaps the treatment is so mild that there is not much cicatrization as yet. If Preble is right, and this is what we wish to avoid, then this mild form of treatment is correct. Certainly from a clinical standpoint he is greatly improved.

When this patient was first interviewed he denied venereal disease, but at the time of taking the blood specimen he admitted having a slight hair-cut 39 years before, which had healed without medication. He had no secondary manifestations and had raised a healthy family, without accidents of pregnancy or illness that could be attributed to syphilis.

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DISCUSSION

Dr. Herrman H. Harris, Jacksonville:

I have enjoyed this paper by Dr. Caldwell very much indeed. It is a most important subject. Just how prevalent syphilitic heart disease is, we do not know.

Would like to state some facts relative to what we have found in Jacksonville in the County Hospital there. The service is divided between Dr. Stanley Erwin and myself, and for the last five years the instances of syphilitic heart disease have

been over eighty per cent. You must take into consideration, however, that ninety per cent of the patients who enter the hospital on charity service are negroes.

Just how much the myocardium may be damaged in syphilitic heart disease we are not yet quite ready to say. Up to a few years ago it was the opinion that most of the damage was on the vascular trunk or the first portion of the aorta. However, since the marvelous work done by Waltham, who found spirochetes in large numbers in the myocardium, we are inclined to the belief now that the myocardium suffers more than it would merely through involvement of the coronary orifice, which of course to some extent cuts down the blood supply to the myocardium.

My experience has been very similar to that of Dr. Caldwell regarding treatment of these cases. Most splendid results symptomatically. They do improve symptomatically, but I must admit that the pathology does not seem to show much change from treatment. I thoroughly agree with Dr. Caldwell that the treatment should be rather mild and cautious and prolonged, rather than the intensive arsphenamin treatment. In the few cases to which we have given intensive arsphenamin treatment, in the Duval County Hospital, the results have been disastrous. We now give iodides in small doses or mercury and bismuth intergluteal with some sodium cacodylate intravenously.

Syphilitic heart disease has not interested us very much from the standpoint of prophylaxis. However, we are going to be compelled in the near future to make an attempt to lower the death rate from heart disease in the same significant way we have been able to do in tuberculosis. The entering wedge will be syphilitic heart disease.

Dr. Paul White recently told me in conversation that in Vienna and Berlin last year he was informed by a few eminent cardiologists that already the death rate from syphilitic heart disease in Austria and Germany had shown a substantial reduction, due to the propaganda among general practitioners, impressing upon them the value of early and thorough treatment of syphilis, in its primary and secondary stages.

Whether we can cure syphilis or not is still a debated subject, but there seems to be little doubt that much of cardio-vascular involvement, incident to syphilitic infection, can be prevented.

Dr. Herbert Caldwell, Lake City (concluding):

I wish to thank Dr. Harris for his thoughtful discussion of this short paper.

TWO ASPECTS OF HYPERTENSION*

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PART I.—(Peripheral Resistance)

Blood pressure is dependent upon the following factors:

1. The pumping action of the heart.
2. The action of the aortic valve.
3. The elastic blood vessels.
4. The peripheral resistance.
5. The constituents and behavior of the blood.

Factor four or the peripheral resistance is the friction of physics and presents for examination two parts: component A, or the retarding influence of roughness, and component B, an electrical component producing resistance because of a charge on the colloids of the blood and the vessel wall due to the velocity of the blood.

An excellent review of the factors of blood pressure and hypertension is found in Hirschfelder:

"Dawson has shown that the mean pressure is very constant in the arterial system and that it falls slowly as the capillary system is approached. The decline of the maximal or systolic pressure is a steep curve. The blood pressure in the brachial artery of a man is less than that in the femorals; the difference may amount to 100 mm. in disease. The horizontal position obliterates the difference. Erlanger and Hooker have shown that the minimal pressure rises in the change from prone to standing."

After meals the maximal pressure rises. Exercise (Schott, Massing, Cabot, Brown), sensory stimulation (A. Berg), mental effort (Zabel) and psychic influence raise the blood pressure (Hirschfelder). Cannon and De La Paz ascribe the rise to adrenalin. In sleep, blood pressure falls (Howell, Brush and Fayerweather). In asphyxia, Konow and Stentick show curves of the rise and fall due to progressive irritation of the central nervous system. Sojourn in the tropics brings about a fall as does exercise at times.

The following diseases are associated with high blood pressure: nephritis (Reviews of Janeway and Pierce), lead poisoning, chronic hypertrophy of the heart, aortic insufficiency, conditions of increased intracranial pressure, meningitis, cerebral hemorrhage, brain tumor, uremia, Jacksonian epilepsy, idiopathic epilepsy, vascular crises, angina pectoris, Stokes Adams' syndrome, pregnancy, chronic polycythemia, cyanosis due to heart failure, and chronic hypertension or presclerosis.

The chemical abnormality of the blood is the subject of voluminous literature: presence of noncoagulable nitrogenous bodies (Erben), the prurine bodies (Crofton), faulty excretion of metabolic products by the kidney are blamed in



FIG. 1.—The Nernst Tube for Cataphoresis.

turn. Allen ascribes it to filter failure of salts and water. Adrenalin is given a place by Cohn and pituitrin by many recent workers.

COMPONENT A

Microscopic roughnesses exist on the surface of bodies apparently smooth in surface texture. When such bodies are in motion in respect to each other these roughnesses act as retarding influences.

COMPONENT B (Dorn effect)

The electrical charges or colloids when in motion are of great importance in the study of the circulation. When colloids move in liquids, or pass along a membrane, an electrical charge is acquired, *i. e.*, they become either plus or minus

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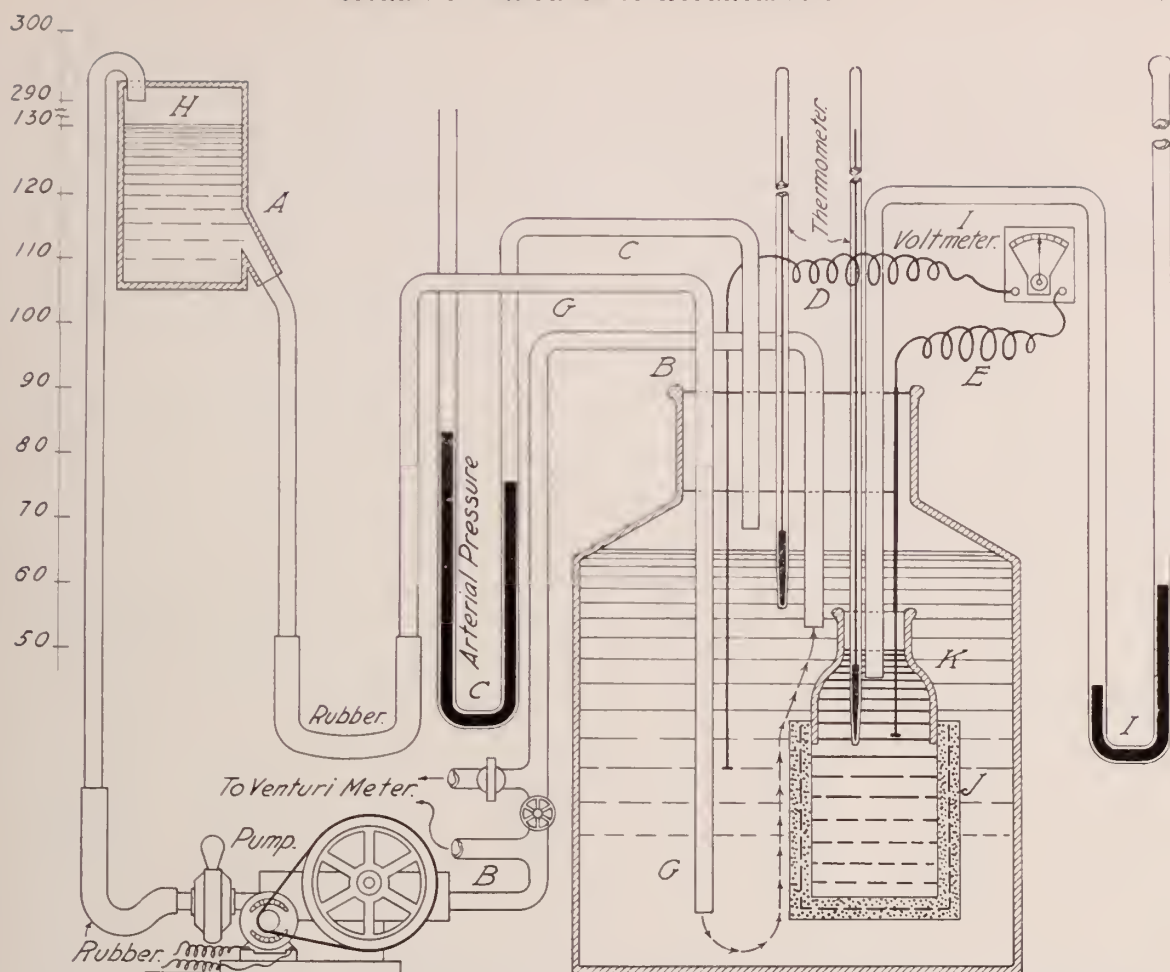


FIG. 2.—The Resistometer. (a) Laboratory set-up for a phantom circulation. (b) Manometer represents hydrostatic or blood pressure. (d-e) Electric circuit. (j-k) Capsule. (i) Osmotic pressure. Thermometers for thermodynamic experiments.

in respect to the membrane in question. Whenever a plus or minus charge exists in nature, there is a strain on the part of such charged bodies to approach each other in order to reunite such charges as do two pith balls of opposite signs. When such strain retards the flow of the blood in the arterial system, it becomes of interest in the study of hypertension.

Means at hand to arrive at a value for estimation of this important factor is made possible by recent studies of electric charges on colloids. The study of osmosis was made possible by the discovery of Traube (1867) of how to construct artificial membranes permeable to water but not to solutions of certain dissolved substances.

Pfeffer (1877) made further examinations and advances in the technique of this phase of biological chemistry. A porous pot 6 to 8 cm. high and 2 to 3 cm. in diameter, hereafter to be known as the capsule, is sealed by means of sealing wax to a glass tube. If filled with the solution of a salt, such as potassium ferrocyanide, and then the outside of the pot be soaked in copper sulphate or

ferric chloride, an insoluble colloid membrane is formed in the meshes of the capsule. This membrane is diagrammatically indicated by a line in Fig. 2.

A review of the preparation of various colloid membranes has been published by Boutoris. If a solution of sugar be placed inside the capsule, and capsule and contents be immersed in pure water, a current of water will enter the capsule at a pressure shown by the manometric tube (I) of Fig. 2. Van't Hoff computed this movement and found it to agree with Boyle's law of gas pressures.

In 1885, Hittdorf noted a transfer of the salt concentration in a fluid by the electric current. Sir Oliver Lodge, Whetham and Nernst used colored solutions, later thickened with gelatine to make visible and fix the bodily transfer of such salts. This process is known as cataphoresis.

If an electrode is placed in the earthenware pot and one in the surrounding fluid a current is noted on the voltmeter. This electric value is known as the Dorn effect. (Freundlich, Kruyt, Freundlich and Ronn.)

If the voltmeter be replaced by a battery, a streaming of particles takes place toward the electrode having a charge of the same sign as the surface charge on the membrane. The behavior of the liquids in motion can be observed by colored solutions and the manometers of Fig. 2. This process is known as electroendosmosis. If electrodes are connected to a voltmeter, as shown, and pressure is applied on the surrounding liquid (hydrostatic pressure), a potential can be read off on the dial of the voltmeter. This is the streaming potential.

The resistometer is a phantom circulation arranged to show all these factors both at rest and when in circulation. The individual colloids and salts of the circulating medium can be varied in concentration. The colloid membrane can be varied to analyze its function as can be the contents of the capsule. If an electric battery impress its potential and cause a streaming toward the capsule, this capsule then can be likened to the kidney or other excretory organ or take on the function of tissue in respect to capillary. The effect of this excretion can be read off on the manometer. A Venturi meter registers the velocity of the flow when desired. Its theory is discussed in another section. The influence of chemical bodies injected directly in the blood stream, their mechanical roughness or smoothness, and their electric fitness can be ascertained. Osmosis can be studied under atmospheric, hydrostatic and electric pressure. Substances can be dialyzed from the capsule to the circulation and the physical effect noted on velocity and pressure. Secretion can be studied from its chemico-physical side.

The Dorn effect, produced by allowing powdered quartz to fall through two meters of toluol by the force of gravity alone, causes a potential of 80 volts. This amount shows the magnitude of the charges on the colloids of systems at rest. In the circulation, these colloids flow at a great velocity or speed and such strains are multiplied rapidly. When a vessel and its emptying system are coated with a fatty or oily substance this atomic attraction is lessened, and its retarding influence (the peripheral resistance) is also diminished.

The Venturi meter (Fig. 3) is an instrument invented by an Italian engineer to measure the velocity of a stream. The upright tubes (b, c, a) Fig. 3, measure the atmospheric pressure which is shown diagrammatically by the shaded portion (a) and the white portion between A and O is supposedly the water pressure.

The successive diminutions of the bore of the channel at (e) increase the peripheral resistance. When the channel is successively narrowed, a suction is created by the flow of the water in the portion proximal and distal to this constriction. This suction or vacuum has an attraction for the

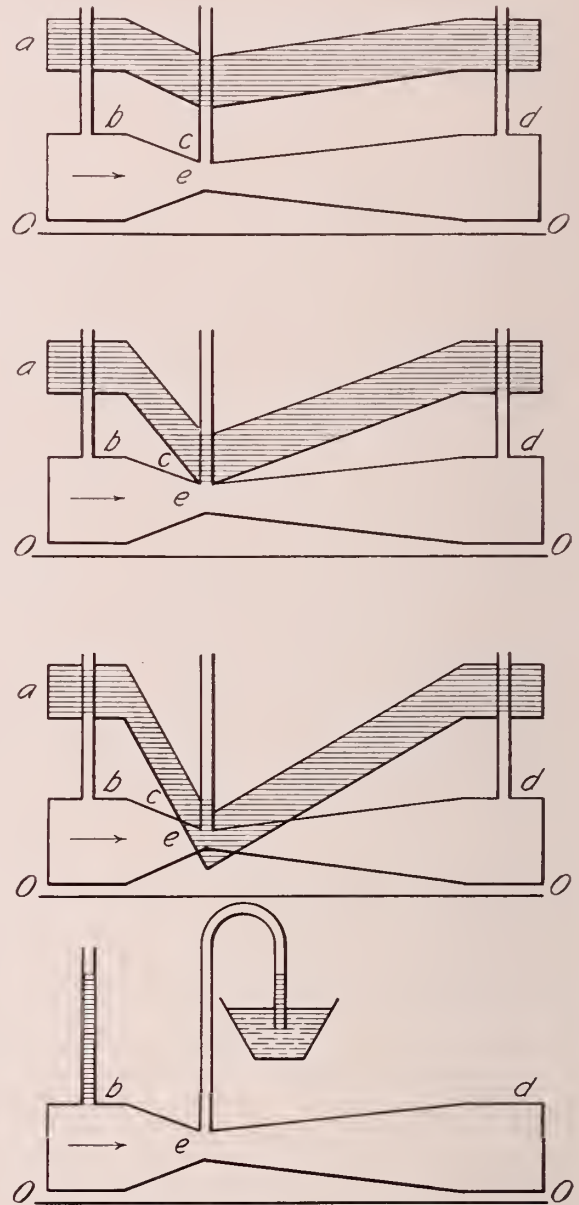


FIG. 3.—The Venturi Tube (Trautwine). Successive narrowing of the tube at (e) increases the attraction of the circulating fluid. This attraction draws down the atmosphere obliterating the water pressure which is shown in the standard tube (c) at this point. In the fourth diagram (a) has disappeared altogether, having been converted into a suction or vacuum.

atmosphere (shown diagrammatically by the bend in a) which is now less than the normal atmospheric pressure. As the constriction is increased, mercury to a certain height is sucked up by the tube, the height of the column of mercury being proportional to the original velocity head. It is then of use as a water meter. However, this

theory has never satisfactorily explained its action. This discrepancy physicists have called the "paradox of the Venturi meter." The process is obviously one of electric attraction caused by flowing matter.

These diagrams are brought to the notice of the clinician, however, only in order to demonstrate the fact that at high velocity a suction or vacuum is present uniformly on all of the circum-

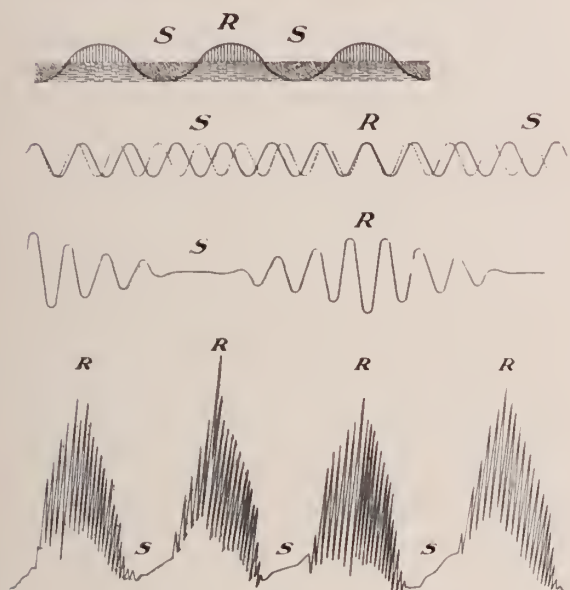


FIG. 4.

Curve (a). The water wave. Hills, R; Valleys S.

Curve (b). Interference of two waves. R and S shown in the process of change.

Curve (c). The "bat wing" curve adapted from Milliken and Gale.

Curve (d). Curve of Cheyne Stokes' respiration adapted from Brubaker.

ference wall and not limited to the vertical pipes as in the diagrams. This vacuum is a tremendous safety factor and clinical measures should be directed towards its preservation and increase.

CONCLUSION

The colloids of the blood stream then exhibit electric phenomena of attraction which should be studied from the standpoint of the therapist as well as the physiologist. The introduction of fats and oils through the intestinal tract and thoracic duct offers a fascinating vista in the control of both components A and B. The production of the blood potential is in agreement with the theory of the electrical nature of matter in motion (Einstein). The dictum of the removal of the air in a Venturi tube or a vacuum pump by microscopic roughness of the circulating fluids should be replaced by the more rational one of an electric attraction. Increasing the velocity of the blood under proper condition is a means of con-

verting pressure against the vessel wall into a suction for its protection. Capillary attraction and endosmosis are kindred and related electric functions.

Some success has been attained in the treatment of cases of hypertension by milk sensitized with creams of different strengths (butter fats). A small series of cases shows improvement in some, and failure of the method in others. In general the work done to date would show that high blood pressure in individuals over 40 years is almost uniformly benefited, while that of younger individuals is not favorably influenced. In such cases the writer has suspected thyroid involvement when kidney complications could not be demonstrated. (This surmise was confirmed in one case at operation by Dr. Crile.) Such failures should stimulate the research however for the following reasons:

1. It would seem that the nature of the dielectric and lubricant influences both the quantity and the sign of the electric potential.

2. Instruments have been developed for demonstration and the detection of these electrical quantities and formulas for their proper evaluation.

3. Research should be stimulated to investigate and return to the clinician the lubricant necessary for the proper control of the electrical factor in peripheral resistance (friction), and the technique of its administration.

PART II.—Cheyne Stokes Respiration and Other Interference (Beat) Phenomena in the Hypertension.

When one solid body moves on another most of its particles retain (practically) their original relative places. In fluids, on the other hand, waves are produced, the contours of which have long been the target of intensive research (Fig. A). A wave form presents for examination a hill (R) for roughness of the wave and (S) for the smoothness of the valley or plain. This smoothness could also be called a flatness. When one wave passes through another the phenomenon on interference becomes apparent (beats). That is to say, the rhythmical alternating roughness and smoothness of the wave contour is altered so that the valley of wave one now contains the hill of the second component. When this occurs, the contour of the surface will remain smooth while whenever the hills of the two waves coincide in time the "roughness" will be exaggerated. The resultant tracing of the contour is best named the "bat-wing curve."

These alternating smoothnesses and roughnesses obey the following law: The number of beats (smooth portions) per period of time is equal to the *difference* in wave frequencies of each component provided their respective energies be equal.

The arterial blood stream has two components of apparently equal intensity, a respiratory vari-

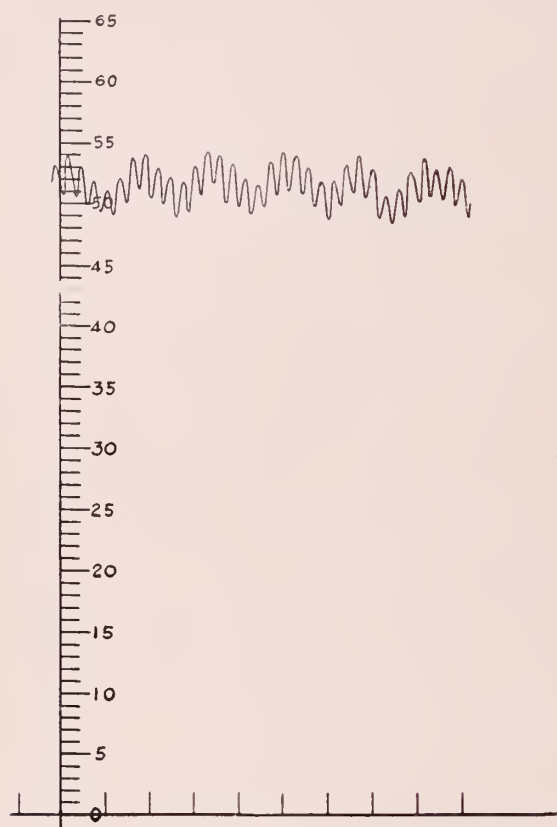


FIG. 5.—Respiratory and cardiac elements of Brachial Pulse (after Brubaker Physiology).

ation of 18 to the minute and a cardiac component of 72 to the minute. When these two components function harmoniously, 18 to 72 being a simple one to four ratio, no beat phenomena are present. When peripheral resistance (as will be shown) is increased, or other disturbances are present, this ratio is disturbed (out of tune) and exaggerated smoothnesses and roughnesses pass through the respiratory center, changing its rhythmic operation.

The resulting respiratory curve, that of Cheyne Stokes' breathing, shows the effect of the batwing curve passing through the respiratory center. Just as the respiratory center corresponds to a chemical difference in the carbon dioxide-oxygen ratio so does this center show a pause when a beat (S) of the pulse respiratory wave passes through it. As each succeeding wave of the batwing curve increases in extent, the respiratory

effort is greater. It produces a maximum at R and declines in a like manner.

WAVE CONTOURS

The diagrammatical cross section of waves in a channel is shown in the illustration as is also the lateral projection of one. The cross section shows how waves of various shapes (due to pe-

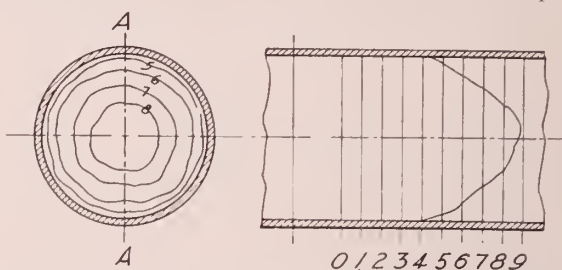


FIG. 6.—Cross section and lateral extension of wave contours in a closed channel. Like numbers in the diagram show contours at a like period of time. (After Trautwine.)

ripheral resistance) vary as succeeding depths of the channel are encountered. The lateral projection shows the deformation of the wave at successive periods of time (due to peripheral resistance).

THE SPHYGMANOMETER CUFF

Krotkow (1905) first drew attention to the auscultatory method of blood pressure determination. A water hammer is the sound produced when liquid is smartly slapped.

Consider a boat stranded on the bank of a stream, the waves slap at its sides. If the boat be pushed to the middle of the stream, this slapping is no longer heard. It is replaced by a soft, pleasant gurgle, which gives way to silence as the boat rises and falls with the ground swell of the channel. In the same way the weight of the column of mercury at first grounds the air bag and the pulse is obliterated. The slowly diminishing column of mercury allows the buoyancy of the air cushion to come into play. Its body is buoyed up by the liquid with a force equal to the weight and pressure of the blood so displaced and in this instance can be read off in millimeters of mercury. The extent of the oscillation and the absence of the water hammer announces its arrival in mid-channel.

As the pressure of the sphygmomanometer cuff is increased, if the number of beats or interferences heard in the stethoscope per minute be plotted against the height of the column of mercury at 10 mm. intervals, an interesting curve is produced. Certain relations to pulse and respiratory rates become evident, if these be counted before and after the taking of the pressure counts. These ratios vary in youth, in age, and sex has an influence as

has the pathological condition of the circulation.

At the present writing no definite conclusion can be drawn as to its certain significance. The ratio of 1 to 4 or 18 to 72 is not materially disturbed in normal cases, except just before the systolic blood pressure is read off. In severe cases of hypertension, interference between the 18-72 ratio occupies a broad band showing marked tendency for the formation of abnormal rhythm, whenever the arterial wall is compressed.

CONCLUSION

1. Cheyne Stokes' breathing receives adequate explanation in the beat phenomenon of respiratory and pulse waves.

2. Careful count of the beats per minute, per ten mm. of mercury, will aid investigation of functions of the respiratory and circulatory centers in hypertension.

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SPINY AMARANTH

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A new weed, at least new to us in this section of Florida, has been revealed through searching for the causal factor of an apparent pollen sensitization case. This weed, spiny amaranth, botanically known as *amaranthus spinosus*, is reported to be a weed of great hay fever potentialities because it is a wind pollinated plant that yields large quantities of pollen.

Spiny amaranth is a late summer plant and a troublesome one in the southern states, but not in the north. It is sometimes called "prickly careless weed," and otherwise called "soldier weed" but is usually referred to as spiny amaranth. It pollinates from June throughout September and therefore must be a causative factor in Florida and neighboring States with any patient who reacts markedly to it. It is wild, being no more cultivated than ragweed or any other trouble creating weed.

CASE REPORT

B. M., a male 23 years of age, consulted for a profuse nasal discharge accompanied by cough

which was non-productive. The patient stated that he had this every year but that this year it seemed to be aggravated. The cough was worse in the morning with nasal secretions which caused much blowing of the nose.

Examination revealed a catarrhal rhinitis with a tracheo-bronchitis (confirmed by chest examination by family physician.) Local treatment to the nose was instituted and because of the seasonal occurrence of the disturbance, cutaneous pollen tests were advised. This was July 18th, 1930. At this time, the symptoms had been present for about two weeks.

The patient was referred to Dr. H. L. Bryans who, in using his diagnostic set, included an unknown in the set by the name of spiny amaranth. Much to his surprise, this was the only pollen to which the patient was sensitive. It gave a very marked reaction.

A treatment set was ordered at once and the patient was again tested with the solution of 1-10,000 dilution. Unexpectedly, a wheal promptly formed with one drop of this solution at this dilution.

The local treatments to the nose, consisting of tamponades and shrinking sprays, gave very slight relief.

On August 15th the co-seasonal schedule of treatment was instituted. After the third injection of the 1-10,000 dilution, the patient felt relieved. The dilutions of 1-5,000 were given followed by 1-1,000 and 1-500. Only once did the patient complain of feeling any reaction from the series. They were given daily up to the 1-1,000 dilution and then finished with every other day injections, and when the 1-1,000 was first given, he complained of stuffiness and itching in the nose. When given on alternate days this did not recur.

The patient is free from any symptoms now, and has been so since the first week of treatment. He has had no change of environment nor has the time of his trouble extended as long as in previous years.

He has been retested cutaneously and found to be desensitized. The preseasonal treatment has been advised for the ensuing year.

CONCLUSION

Quite by accident has a pollen sensitization to a weed quite unknown to us been uncovered. It is reported in the hope that some other obscure cases may be tested with this pollen which can now be definitely added to the hay-fever list for the southern states.

THE DIAGNOSTIC VALUE OF THE SIGMOIDOSCOPE*

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Fort Lauderdale.

The symptoms that usually take the patient to the proctologist are bleeding, pain, diarrhea, constipation, foreign bodies and discharges, but the patient is more likely to complain of having piles. As Buie has stated, when a patient complains of having piles, he may be suffering of any disease, from constipation to cancer. Too many physicians accept the self-diagnosis of piles and give prescriptions for ointments or suppositories and, consequently, many unfortunate results follow which could have been avoided by careful examination. In the sigmoidoscope we have an instrument with which a direct view can be had of the lower 25 or 30 centimeters of the alimentary tract. Therefore, its use should be encouraged to complete every examination of patients complaining of ano-rectal and colon disease. While the sigmoidoscope gives no information beyond its range, it will rule out definitely those diseases of the rectum and lower sigmoid that usually are difficult to diagnose with the X-ray.

I believe it is particularly timely to urge more thorough rectal examinations, because there are so many unethical equipment houses offering half-baked courses in proctology, in addition to the thousands of pile remedies on the market, all offering to the pile sufferer a cure or relief. As a result, the average person suffering with what he believes to be hemorrhoids, will probably treat himself for months and years before he consults a physician. When he does so, he may or may not receive a thorough proctoscopic examination. In case his physician is surgically inclined, he may without further investigation treat the piles by injection or surgery, while if a thorough examination had been made, a co-existing cancer might have been found. In the Mayo Clinic series of cancer of the rectum, a large percentage had been confused with piles, and 10% of them had been operated on for this disease after the onset of malignancy. Buie found, in a series of over 2,000 cases of cancer of the rectum, that 18% had been treated or operated on for hemorrhoids.

Of all symptoms that cause the patient to seek medical advice, bleeding is probably the outstanding sign-post of organic disease of the rectum and colon. Bleeding suggests ulcerations. Ulceration anywhere within the gastro-intestinal tract

will show blood in the stools. It may be slight or profuse. It occurs in hemorrhoids, chronic ulcerative colitis, tuberculous colitis, amebic dysentery, carcinoma, benign tumors, polyposis, diverticulitis and stricture. The most common sign of cancer of the rectum is bleeding. Of one series, 88% complained of bleeding. However, bleeding is a sign of ulceration and indicates a breaking down of the growth. Since early diagnosis is imperative, the ideal can only be reached when cancer may be discovered before bleeding takes place. It is said that the average time of existence of cancer before patient seeks advice, is over 11½ months. During this period, he has been treating himself with various ointments and suppositories. When he does seek medical advice, it is usually too late. Already an inoperable condition exists.

The cause of diarrhea may be recognized at once with the sigmoidoscope. Frequently, an impaction of feces in the sigmoid will cause enough irritation of the bowel to bring on a diarrhea. Rectal constipation often causes an increase in frequency of stools. In the different types of colitis, not only will the proctoscope reveal the true condition, but it may be used for treating directly the ulcerations.

A discharge without diarrhea that soils the linen is a common symptom of ano-rectal disorders, the most common of which is fistula in ano. Cryptitis, chancre, chancroid and carcinoma may cause a discharge. The sigmoidoscope will assist more than any other available means to reveal its cause. Frequently, conditions in this region cause so much inflammatory reaction that because of the sensitiveness of this area, the physician finds it difficult to make a complete examination. The patient will hardly allow the medical attendant to touch him, because of the pain. In such cases, I do not hesitate to anesthetize the area with caudal anesthesia. This is a safe procedure and can be carried out readily in the office. It will only take a few moments longer, and as a result, a thorough examination can be made with complete relaxation of the parts.

Pain may co-exist with either bleeding or diarrhea, or both. If the pain is cramp-like and of a grinding character along the line of the colon, a chronic colitis should be thought of while if the pain is localized, cancer is suggested. As Judson has pointed out, there is little sensitiveness to pain except within one inch of the anal opening, which, when present justifies the physician's attention to thrombotic piles, fissures, fistula in ano, ulcers and abscesses of this region.

*Read before the 4th Annual Meeting of the Florida East Coast Medical Association, Melbourne, Oct. 2, 3, 1930.

It is hardly necessary to call attention to the ease with which foreign bodies may be detected with the aid of the sigmoidoscope.

The sigmoidoscopic examination is usually made with the patient in the knee-chest position, or on a table especially designed for the purpose. After inspecting the anus and the surrounding area the index finger, well lubricated, is inserted through the anus and lower tract. This procedure not only gives to the examiner valuable information, but dilates the sphincter and lubricates the canal. After withdrawing the finger, the sigmoidoscope properly lubricated is inserted. At the same time the patient is asked to cooperate by bearing down, thus relaxing the sphincters. After the instrument passes the anal canal, it is depressed and passed on to mid-sacrum, when the obturator is removed. Then with the aid of the light, the instrument is passed on to its full length. When the obturator is removed and the outer air enters the rectum, the valves of Houston are brought into view. At the promontory of the sacrum, more or less resistance to the onward progress of the instrument may be encountered because of a fold of mucous membrane situated at the junction of the rectum and colon. Caution must be exercised in passing the instrument, particularly in inflammatory conditions. Perforation has been reported several times, and frequently because of too much air inflation.

The condition of the mucous membrane of the pelvic colon should be carefully observed. The normal mucous membrane will not be traumatized with the instrument or by the use of the cotton swab. Normally, the portion of the colon at the sigmoid flexure is freely movable, and if it appears fixed at this point, the presence of adhesions should be considered. The valves of Houston are occasionally found greatly hypertrophied, and may explain an obstructive type of constipation.

In ulcerative diseases of the colon and rectum, the granular bleeding points following the use of the cotton swab are characteristic. In chronic ulcerative colitis and amebic dysentery, the sigmoidoscope will not only determine the differential diagnosis by the characteristic type of lesion, but smears may be taken for microscopic examination which will reveal either the *entamoeba histolytica* or the diplococcus of Bargon.

In cases of cancer of the rectum, the sigmoidoscopic examination should alone insure a correct diagnosis in every case. The lesion of carcinoma is at once recognized. It is usually a single proliferating mass. If it has broken down, we will have an excavating type of ulcer which is necrotic

and bleeding. In any case, the surrounding mucous membrane is normal and uninvolved.

In polypoid growths, there are no necroses or bleeding. They may ulcerate at the tip, but should not be confused with other lesions. If they are limited to the field of the proctoscope, they may be readily fulgurated. Biopsy will clear up any question of diagnosis, and can be taken while the sigmoidoscope is in position.

One might go on indefinitely describing the different pictures that varied pathology will give during a routine proctoscopic examination. However, it is not the purpose of this paper to go further into the diseases of the rectum and colon than is necessary to emphasize the diagnostic value of the sigmoidoscope.

Before closing, however, I want to call attention to the large number of disorders, the etiology of which is found in some distant focus of infection. Frequently, the colon and rectum will be found to harbor the infection. Pennington has called attention to the danger of hemorrhoids as a focus of infection in gastro-intestinal diseases. Bargon reported last year a series of 693 cases of chronic ulcerative colitis in which significant complications and lesions closely associated with the disease occurred as sequelae to or during the course of the infection. There were sixty-nine cases of polyposis of the colon, fifty-nine cases of stricture of the rectum or colon, thirty cases of arthritis, twenty-six cases of perirectal abscess, seventeen cases of cutaneous lesions, eight cases of nephrosis, or nephritis, seven cases of endocarditis, seven cases of splenomegaly, eighteen cases of perforation of the colon, fifteen cases of malignant disease, five cases of ocular disease, three cases of fatal hemorrhage, two cases of renal calculi, and one case of mesenteric thrombosis, and one case of tetany. The skin lesions included erythema nodosum, erythema induratum, chronic eczema, vegetative dermatitis, hemorrhagic pupura, irregular ulcers of the leg, pemphigus, etc. In the arthritic cases, various types were noted. In one type it was observed that each exacerbation of colitis was followed by a recurrence of the arthritis and with improvement of the colitis there was definite relief of the arthritis. While perirectal abscess was an infrequent complication, its presence has a strong clinical significance. A pure culture of the *diplostreptococcus* was usually recovered from the abscesses. Conservative treatment is imperative in this type of perirectal abscess because, as Bargon stresses, if the usual radical incision and drainage is carried out, there may result unfortunate perianal spread-

ing, and frequently anal deformity. Of the ocular complications, while only five cases were observed, there was no doubt as to the concurrent infection. In all five cases, they occurred in the presence of one or more other complications such as perirectal abscess, endocarditis and arthritis. In the entire series, all the cases were treated by vaccines made from the diplostreptococcus of Bargon isolated from lesions in the rectum. The vaccine gave definite relief or cures in all but seventeen cases, and along with improvement of the colitis, there was an associated improvement of most of the complications.

VITAMINS, AND THEIR RELATION TO THE GASTRO-INTESTINAL TRACT*

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This paper is presented with the hope of creating a new and lively interest in one of the subjects of greatest concern to those engaged in the science of health. To this end, I have reviewed the subject as presented in current medical literature, and have supplemented the same with a classification of certain pathological findings based on one thousand of my own clinical cases.

Until a few years ago, it was thought that all the needs of the body had been well provided for, if it received food containing the proper amounts of carbohydrates, fats, proteins, mineral salts, and water sufficient for growth, heat, and energy.

Protein was known to be essential for growth, and replacing loss by wear and tear. One kind of protein was considered as good as another. Carbohydrates and fats were regarded solely as energy and heat producers. The need for mineral salts was recognized—lime and phosphorus for bone and teeth, iron for hemoglobin.

At a later period, caloric values were extensively studied and became an exact science. In certain schools of physiology, it was given paramount consideration. Many authorities are still blinded by this obsession for calories.

Modern analysis of biological facts, verified by animal experimentations, has made it possible to differentiate five accessory food factors or vitamins, each possessing definite physiological properties. The study of vitamins has revolutionized the field of dietetics in their relation to disease.

VITAMIN A

A deficiency of vitamin A in the diet predisposes young animals to infection and diseases, particularly respiratory diseases. Philip Norman has

demonstrated that dogs, rabbits, rats, and poultry cease to grow, lose weight, and become apathetic to surroundings when fed for a time upon a diet constantly deficient in vitamin A. They will develop a condition known as ophthalmia or xerophthalmia, finally becoming totally blind. This condition has been produced many times in animals by restricting vitamin A, and either cured or relieved by the addition of food containing vitamin A. Xerophthalmia is regarded as a true example of vitamin A deficiency. My own experimentation on rats enables me to concur with Norman in these findings.

Norman and others further state that people are affected with this same disease. Night blindness, observed among Japanese coolies and Eskimos, is cured by giving cod liver oil rich in vitamin A. During and following the World War many soldiers and children who were fed foods deficient in vitamin A had an eye infection that cleared up at once when fed foods rich in Vitamin A.

Vitamin A is fat soluble and, therefore, may be found associated with certain animal fats. The liver of the cod fish is the most productive source; however, it is found in the livers of shark, menhaden, skate, and pollock. It is also found in cheese, butter fats, cream, whole milk, and egg yolk. The vegetables of highest content of vitamin A are carrots, spinach, escarole, and young clover.

Most animals have the capacity of storing vitamin A in some of their organs, as kidneys, heart, and liver. From certain available evidence it would seem that the vitamin was necessary for the correct function of the organ.

When the dietary of persons suffering from diseases of these organs is carefully analyzed, it is found that this dietary has been very deficient in vitamin A and also in other vitamins.

Philip Norman makes special mention of the fact that cows fed upon green pastures secrete milk richer in vitamin A than stall-fed cows. Plimmer concurs in this opinion.

Animals do not have the power of synthesizing (making) vitamins, but they obtain their vitamins directly from the green foods or vegetable matter that they eat.

Mellanby and Green have treated and cured, by giving vitamin A in concentrated form, many cases of puerperal septicemia from whose blood hemolytic streptococci were grown.

Vitamin A is believed to exert a positive effect in building up resistance to disease, especially of the eyes, kidneys, and lungs. It is also necessary for proper reproduction, lactation and growth.

*Read before the Hillsboro County Medical Society, February 18, 1930.

Foods not supplying vitamins are fats, such as: bacon, lard, vegetable oils, and margarine (made entirely from vegetable fats). Other foods not supplying vitamins are carbohydrates, such as: white bolted wheat flour, polished rice, bolted corn meal, sago, pearl barley, tapioca, custard powder, and syrup. Most lean meats are relatively poor in vitamins, supplying them in varying amounts.

Foods lose much of their vitamin A content through oxidation. The fats become rancid, and the vegetables lose their vitamins (especially vitamin A) in the process of home cooking, where the heating is done in the presence of oxygen. Commercially canned foods retain most of their vitamins, because air (or oxygen) is excluded in the canning process. Storage greatly lessens the amount of vitamins in raw fruits and vegetables, while properly canned goods retain their vitamins for a long period of time.

VITAMIN B

Water soluble vitamin B, in contradistinction to vitamin A, is never associated with fats or oils of either vegetable or animal origin. This vitamin is the most widely distributed of all the vitamins, and is soluble in either water or alcohol. Its absence in the diet causes beriberi and probably pellagra in man and polyneuritis in poultry. A deficiency of vitamin B produces a marked loss of appetite or a depraved appetite, a disturbance of the growth rate, loss of weight, lack of vigor, anemia, constipation, colitis, and appendicitis. It may also cause serious functional disturbance of the secretory, motor, protective, and assimilative functions of the intestinal tract, which may end fatally. Persons who suffer from mucous colitis have usually limited their diet to milk, white cereals, polished rice, over-cooked vegetables, butter, and large quantities of sugar—a diet notably deficient in vitamin B, iodine, calcium, and sugar.

An analysis of the habits of the average constipated individual shows little or no roughage and a vitamin B deficiency. Yeast is of great value in treating this disease, because it is high in vitamin B.

Vitamin B is found in all green plant tissues, roots, tomatoes, tubers, fruits, brewer's yeast, nuts, and in cereals made from whole crushed grains and seeds. It is found in meats, especially liver, heart and kidney tissues. The flesh of chicken, turkey, duck and guinea fowl is deficient in this vitamin.

We wonder how anyone could suffer from vitamin B deficiency when it is so commonly found in foods in their natural state, but it is a fact that

most people do. When we consider that 2/3 of the nation's food consists of bolted flour, polished cereal, white meal, and highly refined sugar, we then see how difficult it is to compensate for this loss of vitamin B in the remaining 1/3 of the diet. Few foods contain enough vitamin B to balance the deficiency in polished cereals alone.

The type of wrong diet most common among the rich shows an excess of carbohydrates, protein, fat, and vitamin A. In the diet common among the poorer classes, potatoes are practically the only source of vitamins B and C. Their food consists largely of white bread, bacon, fish, and sugar. This diet has an excess of carbohydrates, and a shortage of vitamins. Both diets are constipating and lower resistance to such infections as tuberculosis, influenza, and pneumonia. Plimmer believes they are probably cancer producing. The preponderance of carbohydrates unbalanced by vitamin B is a fault common with both rich and poor. Plimmer and Rosedale have shown in their experiments that not only the carbohydrates must be balanced by vitamin B, but also the protein and fat of the diet must each be balanced by vitamin B. Plimmer and Rosedale estimate that five to ten per cent of the diet should be vitamin B.

Birds that have neuritis are promptly relieved by feeding brewer's yeast. Bran and vegetables that carry a high vitamin B content are also valuable because they carry roughage for the bowels.

Macy and her co-workers have demonstrated that most American nursing mothers on an average diet produce a milk exceedingly low in vitamin B, though adequate in other vitamins and sufficient in quantity. It is, therefore, of greatest importance that food rich in vitamin B should be eaten by all nursing mothers, or that vitamin B should be supplied directly to all nursing babies at the earliest age. Probably the best form of vitamin B to give babies is fresh brewer's yeast or wheat germ sugar, known as vitavose. Wheat germ sugar is more palatable, more conveniently used, and is more available than yeast.

The prenatal development of the child is greatly influenced by diet; therefore, it is essential that the mother eat foods containing enough vitamins to insure the proper development of the child, and the preservation of her own health.

Vitamin B contains two factors: the one, the pellagra-preventing factor, is not easily destroyed by heat; the other, the anti-neuritic factor, which stimulates the appetite, is readily destroyed by heat. Morris Fishbein states that vitamin B is destroyed entirely by heat at high temperature (115° C. to 120° C.) Therefore, vegetables

should be steamed or cooked at a low boiling point. This vitamin is also washed away in the water in which vegetables are cooked.

The anti-pellagric factor of vitamin B complex is now known as vitamin G. It will probably be changed later to vitamin F.

VITAMIN C

Vitamin C is commonly known as the anti-scorbutic vitamin, although its usefulness covers a much larger field than is usually assumed.

This vitamin is necessary for maintaining normal health. We lead a hand-to-mouth existence in regard to vitamin C, for we cannot store it for tomorrow's needs. A shortage of it is quickly felt and made known by such symptoms as lack of stamina, loss of vigor, general irritability, lowered vitality, slow healing of wounds, sallow and muddy complexions, and fleeting pains, which are sometimes mistaken for rheumatism in joints and limbs.

Vitamin C promotes normal growth and development of teeth and bone, protects the body against infection, and prevents and cures scurvy. Probably many forms of gastro-intestinal disorders are unrecognized or undeveloped types of scurvy. Pyorrhea and gastro-intestinal ulcerations are usually observed in people who eat but few foods containing this vitamin; or if they do eat them, the vitamin is usually impaired or destroyed by improper cooking methods.

The best sources of vitamin C are the following: cabbage, lettuce, oranges, grapefruit, lemons, strawberries, tomatoes, spinach, green beans, turnips, rutabagas, and green peas. In a general way, raw fruits, raw Irish potatoes, roots and tubers, and green leafy vegetables contain this vitamin. Milk may or may not contain it, depending upon the provender of the cow.

Vitamin C is the most easily destroyed of all the vitamins. The anti-scorbutic properties of fruit and vegetables are lost by heating, drying, and oxidation, such as occurs in ordinary and commercial processes. When foods are cooked away from the air, as is the case in cold pack methods of canning, or when the food is acid as in fruits and tomatoes, the ill effects of heat on vitamin C seem to be greatly reduced. The quantities in cabbage and potatoes are diminished by boiling twenty minutes, and altogether lost by long slow stewing. Heating twice is also totally destructive, as in boiling of already pasteurized milk. Vitamin C is quickly destroyed by alkali, as in cooking vegetables with soda to preserve their green color. To make assurance of getting vitamin C doubly sure, however, it has become a

routine practice to feed expectant mothers some raw vegetables or fruits daily, and to include tomato juice or orange juice in the diet of babies whether bottle or breast fed, and to urge everyone to increase the use in the diet of those fruits and vegetables which may be eaten raw.

VITAMIN D

Fat soluble vitamin D is the anti-rachitic principle. It was isolated from vitamin A, which was formerly considered to be anti-rachitic. Calcium and phosphorus metabolism seems to be controlled by this vitamin.

Rickets can be produced experimentally in animals by depriving them of either calcium, phosphorus, or vitamin D. This is a common disease among men, animals, and poultry.

Rickets is one of the most common nutritional diseases in the temperate zone. Active rickets is usually associated with the early years of life. However, it seems that the older children and adults are not immune to the disorders that result from a faulty use of calcium and phosphorus, which may be caused by a lack of vitamin D. Vitamin D is believed, by many investigators, to be of value in raising the resistance to disease. This may be due to the fact that vitamins A and D are often associated together in the same foods. However, vitamin D is essential for the development of strong, well-shaped bones and teeth and for normal health. While vitamin D cannot take the place of any building material, such as phosphorus and calcium, it should be emphasized that it controls the metabolism of phosphorus and calcium that would be useless without it. Vitamin D may be introduced into the body by the use of foods rich in it, and by producing it in the body through the action of light which activates body tissue. This is the only vitamin, about which anything is known at present, that the body itself can produce. The theory is that the action of ultra violet rays of the sun on the bare skin causes it to produce vitamin D. Vitamin D substance is then supposed to be carried to the tissues to control the use of phosphorus and calcium. Violet rays may be produced artificially, and used to prevent and cure rickets in children, and to invigorate adults.

Expectant and nursing mothers need a diet rich in vitamin D, but this is not enough—they should stay in the direct sunlight a part of each day. A child's first teeth are formed even to the enamel, and some of its second teeth are enameled, before it is born.

Rose and Henry state that when children and adults are out in the sun several hours of each day,

and use plenty of milk and eggs from animals that spend a part of each day in the sunlight, and use green vegetables, and some cod liver oil, they should receive an abundance of vitamin D, and should be able to store some for emergencies.

Anderson states, that in many cities, it is estimated that as high as ninety per cent of the infant and child population present some evidence of abnormal conditions of the bones and teeth. These conditions are the direct results of a deficiency of vitamin D, either in the prenatal diet or in the diet of the infant.

VITAMIN E

Vitamin E is known as the anti-sterility vitamin, since sterility results from its absence in the diet.

It is claimed by Simonds, Beckner, and McCallum that vitamin E has a regulative action over iron, similar to the action which vitamin D has over calcium and phosphorus. The fact seems to be fairly well established that vitamin E and iron are both needed for iron utilization, and that sterility, which results from lack of vitamin E, may possibly represent a crisis in iron utilization. This being the case, it is important to include vitamin E in the dietary of expectant and nursing mothers, children, and persons suffering with anemia.

It has been demonstrated that ferrous sulphate is harmful to rats and equally harmful to man. The rancidity of unsaturated animal fats is hastened by the catalytic action of ferrous compounds, tending to destroy vitamins A and E. Ferric citrate is much superior to the ferrous compounds as a source of iron.

The embryo of seeds and leaves is known to be rich in vitamin E. The food richest in vitamin E is wheat germ oil. Vitamin E is also contained in varying quantities in meat, lettuce, milk, whole wheat, wheat germ, dried alfalfa, and rolled oats.

Liver fats contain vitamin E, and liver contains much iron. The great value of liver and kidney in pernicious anemia, and the spectacular results being gotten from their use are unquestionably due to the presence of vitamin E and iron.

Several investigators have attributed pernicious anemia to a lack of vitamin A. It is very probable, however, that a further study of the diets of clinical cases will show not only a deficiency in vitamin A, but also a deficiency in iron and vitamin E.

THERAPEUTIC CONSIDERATIONS

Vitamins are present in varying quantities in many natural foods.

They supply neither energy nor building material, but they do play a very important part in correct utilization of foods.

They seem to profoundly influence or regulate nutrition, glandular activity, and immunity.

Animals are unable to synthesize their vitamins, but depend entirely upon their food for their supply.

A deficient vitamin intake will cause the young to fail to grow normally, stunted reproductive functions, a decline of weight and vigor in adults, predisposition to bacterial infections, and finally the development of certain deficiency diseases such as: rickets, pellagra, scurvy, and ophthalmia.

There are some diseases specifically produced by bacteria. There are a host of other diseases for which we have no definite bacteriologic etiology, but which are associated with some focal infection. The question we must answer is: How did this infection get started in the body?

Why is it that pyorrhea, tonsilitis, bronchitis, gastro-intestinal infections are so universally associated with clinical syndromes? The answer is: excess consumption of devitalized, refined, devitaminized, concentrated, cured, dried, and preserved foods, and too limited consumption of foods in their natural state.

In my clinical considerations of one thousand of my own patients, not one patient was found who had taken a correct diet for any appreciable length of time.

CLINICAL CONSIDERATIONS

I wish to report the outstanding pathological findings, as related to vitamins, in the last one thousand cases examined by me.

A and D.—Ninety-four per cent of these cases showed evidence of tubercular infection, either active or inactive. A deficiency of vitamin A is held responsible for a large percentage of tubercular infections. However, vitamin D controls the metabolism of calcium and phosphorus, the calcium of which is very essential both as prophylactic and cure. Milk has been taken by most of these cases to a greater or lesser extent, but the calcium has not been utilized.

B.—Seventy-four per cent were constipated. Fifty-five per cent either had appendicitis or had had appendectomies. Seventeen per cent had no appetite. Twenty-three per cent had a perverted or variable appetite. Eight per cent had an acidity. Forty-two per cent had excess acidity. All of these may be classified as symptoms of vitamin B deficiency. Vitamin B is the most essential of all vitamins, as it must balance an excess of vitamin

A and carbohydrates. Roughage is here found to be deficient.

C.—Forty-seven per cent had mucous colitis. Twenty-seven per cent had gastric or duodenal ulcer. Thirty-nine per cent had pyorrhea. Sixty-one per cent had infected tonsils. A deficiency of vitamin C is largely responsible for these conditions.

E.—Forty-three per cent showed deficient number of red corpuscles—the result of faulty iron metabolism due to a deficiency of vitamin E. Forty-five per cent had a deficient number of white corpuscles—showing a lowered vitality and resistance to disease.

May I call your attention to the fact that while fifty-five per cent of the one thousand cases under consideration had appendicitis, eight-five and one-half per cent of these cases of appendicitis had either tonsilitis, or pyorrhea or both?

Forty-seven per cent of the thousand cases had mucous colitis. Ninety-eight and one-half per cent of these mucous colitis cases had either tonsilitis, or pyorrhea or both.

Twenty-seven per cent of this one thousand had gastric or duodenal ulcer. Eighty-five and one-half per cent of these ulcer cases had either tonsilitis, or pyorrhea or both.

I believe there is some significance in the fact that a large number of patients suffering with gastro-intestinal pathology also have an oral infection which preceded this pathology.

In my own laboratory, I have made cultures of stomach contents and upper bowel contents, and of newly removed tonsils from the same patients, and have found the predominating bacteria from this portion of the gastro-intestinal tract and tonsils to be identical. This should be proof enough that gastro-intestinal pathology is closely related to, and in most cases caused by, oral infection. In a large percentage of cases the cause of oral infection is lack of vitamin C.

Is it not time for us to view with great concern the disaster wrought by eating an unbalanced diet?

By an intelligent use of these newly found friends—vitamins, man looks out upon a new day. The hand of death can be stayed for a season; suffering and sickness can be relieved or prevented; and life can now unfold to him its new treasures of health, happiness, and contentment. What is the profession doing to bring into realization this end?

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RADIUM OR SURGERY IN POOR-RISK PATIENTS*

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The principle of complete assessment in the evaluation of the surgical risk frequently necessitates consideration of other methods of treatment. When the operative risk appears unwarranted in certain types of patients, it is possible to meet the indication by the use of radium. I do not wish to burden the members of this society with an abstract discussion concerning radium or surgery. Numerous volumes are available on this subject. A few case histories are presented with the hope that specific problems will be less tiresome.

1. Mrs. M. H. P., white, age 54, married. Complained of dizziness, nausea, vomiting, and right upper abdominal tenderness, onset September, 1928. Nausea and vomiting occurred at any time day or night, seemed independent of exertion but preceded by vertigo. Intermittent vaginal bleeding started in considerable amounts during October, 1928. In the past history was noted increasing obesity and hypertension since operation for cystic tumor in left side of neck fifteen years previously. Dyspnea on slight exertion for several years. Attacks variously attributed to stones in gall-bladder or right kidney

*Read before the Palm Beach County Medical Society, January 13, 1930.

since age 34 years. Menstrual history uneventful, menopause at 40 years. No bleeding or discharge since. Two children living and well.

Physical examination: short, fat, marked girdle adiposity, weight 225 pounds. Heart enlarged, blood pressure 200/90. Tenderness over gall-bladder region. Pelvic findings negative except for enlargement of uterus, at least $1\frac{1}{2}$ times normal size. Bleeding evidently coming from a lesion higher up than the cervix which appeared normal. Laboratory: blood negative except for a slight anemia, nonprotein nitrogen normal. Urine: trace of albumen, numerous hyaline and granular casts, phthalein output good. X-ray studies (Dr. F. K. Herpel): slight cardiac enlargement and aortic dilatation; increased density of gall-bladder, probably gall-stones; low grade diverticulitis of colon; hypertrophic arthritis of dorsolumbar spine. With such a multiplicity of lesions present, it required several days of hospital observation to determine the fact that the dizziness, nausea, and vomiting were apparently central in origin. There developed a definite slight ataxia of the right arm with well marked tendency to sway or fall to the right. With rest in bed and glucose intravenously, the above distressing symptoms soon disappeared. Dr. J. W. Snyder, in consultation, recommended diagnostic curettage and radium. Under morphine-hyoscine semi-narcosis, abundant curettings obtained, slides of which showed mucosa about 3 times normal thickness with congestion and diffuse extravasation of blood according to Dr. V. M. Jared, pathologist. No definite malignant tissue found but enlargement of uterus instead of atrophy, and bleeding, 14 years past menopause, are definite indications for concern. In view of obesity, nephritis, hypertension, gall-stones, etc., abdominal or vaginal hysterectomy offered too great a risk.

Radium application indicated, and 1200 mghrs. given under morphine-hyoscine semi-narcosis. Two 25 mgm. needles used in brass capsule, enclosed by rubber filter; vaginal packing, retention catheter. Subsequent course excellent. Patient put on 2500 calorie diet and has maintained this for over two years. Reduction in weight 225 to 160 pounds and blood pressure 200/90 to 170/90. You can see that her appearance is not cachectic, in fact much better than before her illness. Discharge from radium ceased about six weeks after application and no further bleeding. Uterus practically normal size although distinct irregularities can now be made out in body of uterus.

No urinary albumen or casts noted in the last six months. This patient feels better and is much more active than in the previous ten years. Corpulency was her most serious handicap.

2. Mrs. W. R., white, age 38, married. First seen July 14, 1928, at which time her chief complaints were severe menstrual hemorrhages, weakness, pallor, swelling of ankles and discoloration of skin. She was advised to enter Good Samaritan Hospital for examination and treatment, but was unable to do so at that time. Her blood count and details of examination are given below. On August 27, 1929, over a year later, the patient returned in much more serious condition and anxious for relief. The menstrual bleeding had increased in amount occurring every 3 weeks, lasting 8 to 12 days, very profuse. Past history showed evidence of hemorrhagic disease since infancy. Frequent nose bleeds in childhood, first when three days old. Purpuric spots on skin from slight bruising noted from early age. Definite increased bleeding from small cuts. Bleeding from gums, occasionally lasting all day. Had been in three hospitals in north during 1918, 1920, and 1922 for treatment of various forms of bleeding. Given symptomatic treatment, serums, drugs, etc., apparent temporary relief. Married 15 years; four children, 10, 8, 7, and 4 years. Two miscarriages, 12 and 9 years previously. During pregnancies, always gained weight and strength, during labor and afterward blood loss began as before.

Physical examination: marked pallor of skin and especially mucous membranes. General physical examination largely negative except for great edema of ankles and purpuric spots over arms and trunk. Loud hemic murmur over pulmonary area, pulse 100, min. blood pressure 130/90. Pelvic findings: perineum moderately lax; cervix, midline, slightly enlarged, movable; corpus, $1\frac{1}{2}$ times enlarged, forward, surface irregular and nodular, firm, not tender, movable. Adnexæ negative for mass or tenderness. Detailed laboratory studies (Dr. V. M. Jared):

	Hb.	Rbc.	Wbc.	Index	Diff.
July 14, 1928—Blood	S.35%	3,470,000	3,500	0.5	Neg.
Sept. 1, 1929—Blood	T.40%	1,840,000	3,600	1.1	Neg.

Platelets 100,000. Kahn negative. Clot retraction 45 minutes. Coagulation time $4\frac{1}{2}$ minutes and bleeding time prolonged indefinitely above 30 minutes. Several test tubes of blood could be collected from needle prick to finger unless pressure applied to stop bleeding. Intestinal parasites not found. Urine, trace of albumen.

Diagnosis was made first of a blood disease probably of the purpura hemorrhagica group, with a severe accompanying anemia, and second, myoma uteri, of interstitial type.

The most important indication was to stop the recurrent hemorrhages. Multiple transfusions would not have given much security before operation. Certainly splenic surgery was out of the question at this time and splenic radiation not favored. Radium applied under morphine-hyoscine semi-narcosis in the form of an intrauterine radon tube, filtered by platinum, aluminum foil, and ametal rubber; vaginal packing, retention catheter. 1800 mghrs., menopause dose, was indicated in this case.

Following discharge from hospital, course has been excellent. No more bleeding, slight discharge soon ceased. Liver and liver extract feedings, iron tonics by mouth. Marked improvement in strength and appearance, edema of legs entirely subsided. Two or three years preceding radium application, patient was in bed about half the time, is now able to do entire housework of family. Blood counts approximately 60% normal, purpuric spots occasionally recur and rapidly disappear.

In this connection,¹ it might be mentioned that of 20 cases of splenectomy performed for hemorrhagic purpura at the Mayo clinic between 1923 and 1927, the results were excellent in all except one case, which was curetted, later radium application necessary. All bleeding ceased after application of radium. The diagnosis of myoma was definitely made in the case described above and blood disease considered a factor increasing severity of symptoms and danger of ill advised treatment.

3. A. T., colored, aged 46, married. Chief complaints were weakness, lump in abdomen, profuse menstrual hemorrhages. Lump first noticed eight years previously and had gradually increased in size until now above umbilicus. Greatly disabled in last year, in bed almost continuously for past three months. Examination showed large mass filling pelvis to level 3f. above umbilicus, larger on right, very tender to pressure, slightly movable. Cervix, to left of midline, normal size and shape, slight erosion. Mass to right of cervix probably an intraligamentary part of large myoma. Mass to left of cervix, similar in shape but not so large. Numerous nodules size of walnut on upper anterior wall. Diagnosis made of large myoma of uterus with possible partial necrosis of tumor owing to marked in-

crease in tenderness during the past ten days with afternoon temperature of 99.8°.

Supravaginal hysterectomy and bilateral salpingo-oophorectomy performed with removal of this specimen.* You may notice the level of peritoneal attachment outlined on jar in ink; below this mark are three large masses which constitute at least half of the tumor. Fibroids can be very easy or very hard to remove, depending on their shape and access to vessels rather than upon their size. Observe also the calcified ring at the upper portion with a necrotic center. This patient has been in good health since her discharge from the hospital two years ago. The risk in this case was very great but operative attempt warranted. Radium not to be considered on account of size of tumor and subserous location of nodules. Calcification and necrosis as later verified also contraindications.

4. Mrs. W. D., age 40, white, married, one child. Chief complaints were a lump in abdomen, profuse menstruation, and intractable constipation. Lump first noticed three years previously and increase in size had been rapid. General examination showed a relative anemia. Pelvic findings: cervix, normal size and shape, displaced far posterior by large nodular mass in front which also extended almost to pelvic wall on each side, slightly movable, no tenderness. Mass extended up into abdomen to a level 2 f. above umbilicus. Adnexae, no separate mass or tenderness made out distinct from uterine mass. Diagnosis: large myoma of uterus.

Supravaginal hysterectomy, with removal of this specimen on September 12th, 1928; subsequent course excellent. Note the distribution of large nodules on specimen.* The largest growth arose from posterior wall of uterus. Radium inadvisable because of size of tumor with probable subperitoneal location of myomatous growths more or less separate from cavity of uterus. This last patient could obviously be promised a good result from surgery with a minimum risk.

CONCLUSIONS

Four cases have been presented with somewhat similar complaints but complete assessment of each individual has resulted in widely different forms of treatment. Procedures were selected which afforded the greatest safety. Follow-up records have been satisfactory in each.

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GROUP LIABILITY INSURANCE

The following information has been forwarded to our members through a letter issued by the Executive Committee:

"Dear Doctor:

At the last meeting of the Florida Medical Association, the present Executive Committee was authorized by the House of Delegates to arrange with some insurance company for a group malpractice insurance policy which would be available for any member of the F. M. A. who might desire it, provided such insurance could be obtained for our members at premium rates less than those charged for individual or small group policies.

"Your Executive Committee has made a careful study of malpractice insurance as it is now carried by the various members of our Association. Also, many conferences have been held with representatives of several responsible insurance companies.

"An arrangement has finally been made with the United States Fidelity and Guaranty Company, of Baltimore, for a group policy which will comply with the requirements of the House of Delegates.

"Any member of the Florida Medical Association will be eligible to become a member of this group. In every form of policy there will be a saving in premium rates. This saving will be less for those men who have formerly been insured in small county groups. For those who have been carrying individual policies, it will naturally be greater, amounting in some forms of policies to over 40%.

"This service will be available October 14th, next. Individual policies must be taken out through local representatives of the United States Fidelity and Guaranty Company in your county. Further information may be obtained from the secretary of your county society:

"Respectfully,

L. M. ANDERSON, M.D., Chairman;

M. A. LISCHKOFF, M.D.,

G. R. HOLDEN, M.D.,

Executive Committee."

This arrangement has been under consideration for some time and the Association's only interest in obtaining this insurance is in order that we may serve our members.

The following table indicates the cost of the state group malpractice insurance as compared with the lowest premiums obtainable for county group and individual policies; also the percentage of premium saved in each type of policy:

Amount of Insurance	State Group Premium	County Group Premium	Percentage of Saving	Individual Policy Premium	Percentage of Saving
\$ 5,000/ 15,000.....	.....	\$17.50	....	\$25.00	....
7,500/ 22,500.....	\$17.50	.....	....	.....	....
10,000/ 30,000.....	21.35	23.33	8%	33.33	36%
15,000/ 45,000.....	23.27	26.25	11%	37.50	38%
20,000/ 60,000.....	24.85	28.53	13%	40.75	39%
25,000/ 75,000.....	25.73	29.75	14%	42.50	39%
50,000/150,000.....	29.22	35.00	17%	50.00	42%

For members using X-ray or radium, or both, for treatment, the above premiums will be increased 100%; members using X-ray for diagnosis only will not incur any additional premium charge.

Members employing assistant physicians, surgeons, dentists, anesthetists, X-ray or radium technicians will be charged 50% additional of above rates for coverage on such assistants.

Each practicing physician should carry liability insurance for the number of malpractice suits seems to be on the increase. Most malpractice suits are unjustified but the cost of defending yourself is considerable and should be protected against. If you are protected by liability insurance, you are spared the financial deprivation that may occur as a result of such suit.

STATUS OF MEDICAL EDUCATION

Medical education in the United States has shown a tremendous improvement since 1900, according to the report of the Council on Medical Education and Hospitals of the American Medical Association. The Association has been actively interested in this field since its organization in 1847, when its main object was stated to be "the improvement of medical education in the United States." For the thirtieth consecutive year, the Journal of the American Medical Association publishes statistics on medical education.

The report shows that requirements of pre-medical training have been raised, that standards of medical schools have been more rigidly upheld and that facilities for the training of interns have been improved.

One chart of general interest in the report gives for forty-one countries the number of physicians in proportion to the population. The United States has more physicians in proportion to population than any other country in the world.

The number of medical schools has been materially reduced, due to the merging of institutions into a smaller number of better equipped schools. The total number of medical students is still on the increase, however. There were 21,597 in 1929, with 4,565 graduates.

STATE NEWS ITEMS

Dr. H. Mason Smith of Tampa was recently elected president of the State Board of Health. Dr. H. E. Palmer of Tallahassee was appointed to succeed Dr. W. D. Nobles of Pensacola, resigned, and Dr. Edward M. L'Engle of Jacksonville was appointed to succeed Charles H. Mann of Jacksonville, resigned. The first meeting of the board was held on Saturday, October 25th, at Tallahassee. Governor Carlton and Dr. Henry Hanson, the state health officer and secretary of the board, were also in attendance.

The annual meeting of the Florida Midland Medical Society which convened at Orlando on October 8th was of unusual interest and the papers prepared for reading at this meeting were instructive and held the attention of those present. Eight papers were read and all papers were open for a general discussion. Noon luncheon was served and at the close of the scientific program, the annual report of the secretary-treasurer was read and an election of officers held with the following results: Dr. L. L. Andrews, Orlando, president; Dr. T. M. Rivers, Kissimmee, first vice-president; Dr. Joseph W. Taylor, Tampa, second vice-president, and Dr. Robert C. Black, Plant City, secretary and treasurer.

* * *

Dr. Earl C. MacCordy of St. Petersburg recently moved from 202 Snell Arcade Building to 1335 9th Street, North.

* * *

Dr. and Mrs. H. C. Dozier of Ocala made quite an extended trip in the North recently and Dr. Dozier attended the meeting of the American College of Surgeons in Philadelphia while away.

* * *

Dr. John Blake White has forwarded his resignation as House Physician at the Hotel Ormond, Ormond Beach, having been resident there for twenty-three years. A trip to Europe is contemplated.

* * *

Dr. and Mrs. L. C. Ingram of Orlando have returned from New Orleans where they entered their son in Tulane for his senior year of medicine.

* * *

Dr. and Mrs. H. Gates of Bradenton enjoyed a very pleasant trip through the Mississippi Valley, Tennessee and North Carolina mountains, recently.

* * *

Dr. L. M. Anderson of Lake City, chairman of the Executive Committee of the Association, spent a day in Jacksonville recently and among other things, met with Dr. Gerry Holden, one of the other members of the committee, in connection with some of the business of the Association.

Dr. and Mrs. Marshall Taylor and family of Jacksonville who have been spending the summer in their cottage at Atlantic Beach, spent several weeks in North Carolina before settling down in their home in Riverside.

* * *

Dr. and Mrs. J. R. Chappell have returned to Orlando from a visit to Atlanta and Douglas, Georgia.

* * *

An election of officers was held at the Pinellas County Medical Society meeting, October 3rd, with the following results:

R. K. O'Brien, M.D., President.

L. M. Gable, M.D., First Vice-President.

W. G. Post, Jr., M.D., Second Vice-President.

O. O. Feaster, M. D., Secretary.

George E. Miller, M. D., Treasurer.

New Censors elected for three years are T. R. Griffin, M.D., and H. W. Wade, M.D. All of the officers elected are residents of St. Petersburg.

* * *

Dr. Maurice E. Heck of Miami returned recently from Bushkill, Pennsylvania.

* * *

Dr. H. O. Brown of Clearwater recently attended Dr. Bloodgood's clinic on bone cancer at Baltimore, Maryland.

* * *

Dr. George A. Lassman of Tampa attended the International Medical Assembly Meeting at Minneapolis, Minnesota, and also visited the Mayo Clinic and various hospitals in Chicago, New York, Philadelphia and Baltimore. Dr. Lassman expects to take some post-graduate work while on this trip and will be away about ten weeks.

* * *

Dr. Duncan T. McEwan of New York, nephew of Dr. J. S. McEwan of Orlando, will be associated with Drs. McEwan and Edwards at the Orlando Clinic, Orlando.

* * *

Dr. and Mrs. R. E. Wilhoyte of Lake Wales recently visited Niagara Falls and Albany, New York, and also made quite a visit at Louisville, Kentucky.

* * *

Dr. and Mrs. Norman M. Heggie and daughter, Miss Jeanne, of Jacksonville, spent a very enjoyable Fall visit in New York City.

Dr. John S. McEwan of Orlando is making a trip through the North and expects to be in Baltimore and visit Johns Hopkins Clinic before returning.

* * *

Dr. J. Harrison Hodges of Gainesville has returned from a vacation trip of several weeks spent at New York and Atlantic City.

* * *

Dr. W. H. Ellis of Tumlin Clinic, Miami, has returned home with his family after a fine vacation spent with relatives in Georgia and Tennessee.

* * *

The medical examiners of Florida for the Aeronautics Branch of the Department of Commerce were the guests of Dr. W. C. McConnell, St. Petersburg, November 11th, for an organization meeting. The organization will hereafter meet with the State Medical Association.

* * *

Dr. and Mrs. Graham E. Henson of Jacksonville announce the engagement of their daughter, Gertrude Elizabeth, to William R. Rowe of Jacksonville.

* * *

Dr. Horace Day has returned to Orlando from a visit to Tennessee, his former home.

* * *

Dr. Henry Hanson, state health officer, recently attended the meeting of the American Public Health Association at Ft. Worth, Texas, and also attended the post convention meeting of the A. P. H. A. in Mexico City. Other members of the Florida Medical Association in attendance who are actively engaged in health work in Florida, were Dr. Paul Eaton, director of State Board of Health laboratories; Dr. F. A. Brink, director Bureau of Communicable Diseases; Dr. N. A. Upchurch, city health officer of Jacksonville; also, Dr. Stewart Thompson, director of the Bureau of Vital Statistics.

* * *

The Central Florida Medical Society held its semi-annual meeting at Gainesville on the evening of October 28. The members and their wives and guests, and wives of guests, were entertained at a delightful dinner at seven o'clock at the Hotel Thomas. After dinner, while the doctors were engaged in their scientific and business meeting, the women enjoyed a card party which had been arranged for their pleasure. Everyone, especially

the guests, enjoyed and appreciated the hospitality of the Central Florida Medical Society.

* * *

Dr. H. E. White of St. Augustine attended the meeting of the American College of Surgeons at Philadelphia recently. Dr. White received his Fellowship the night of October 17th.

* * *

Honorable George M. Dame, Senator Fifth District Georgia, and father of Dr. George A. Dame and Dr. Leland H. Dame of Inverness, died at his home at Homerville, Georgia, August 14, 1930.

* * *

Dr. T. Allen Jones has returned to Orlando from an eight months' residence in Asheville, North Carolina, where he went for rest. Dr. Jones will soon resume practice in Florida.

* * *

Dr. G. S. Osincup has returned to Orlando after visiting clinics in Philadelphia and New York. He also visited in Canada, where he was joined by Mrs. Osincup.

* * *

A beautifully framed likeness of the late Dr. Joseph Y. Porter, Florida's first state health officer, has been hung in the executive offices of the State Board of Health building in Jacksonville. The portrait was a gift from the members of the Porter family.

* * *

A very interesting meeting of the Pinellas County Medical Society was held in St. Petersburg October 17th. Dr. W. G. Post of St. Petersburg discussed a clinical case, "Paget's Disease, History and X-rays." Dr. R. H. Knowlton of St. Petersburg read a paper on "Pernicious Anemia, Its Treatment and Report of Cases." Dr. L. W. Horne of St. Petersburg read a paper on "Diabetes Mellitus and Some of Its Aspects."

* * *

Dr. Will L. Wood, formerly of Pine Castle, recently moved to Mount Dora.

* * *

Lieut. Col. L. J. Arnold of the U. S. Veterans' Hospital, Lake City, will be stationed at the Veterans' Hospital, Mt. Alto, Washington, D. C., for a period of four months.

* * *

Dr. G. C. Tillman and family of Gainesville returned recently from a six weeks' vacation in Boston, Massachusetts.

The Medical Study Club of Orlando will have Dr. H. C. Bumpus of the Neurological Department, Mayo Clinic, as guest speaker at their December meeting. The date is not definitely set but very likely will be Friday, December the 5th. All members of the Florida Medical Association are invited to attend this meeting and hear Dr. H. C. Bumpus. Announcement cards will be mailed out later, giving the exact date and the subject which Dr. Bumpus will discuss. The Medical Study Club of Orlando has a guest speaker of national prominence once every year so the meeting in December will be of interest to many doctors in the state.

* * *

Dr. Herman Perkins, formerly of Holopaw, recently moved to 3001 Kings Road, Jacksonville.

* * *

The first fall meeting of the Duval County Medical Society was held Tuesday evening, October 7th, in the Chamber of Commerce Building, Jacksonville. Dr. A. D. Stollenwerk headed the scientific program and presented an interesting paper on "Analgesia and Anesthesia in Obstetrics." With the present wave of enthusiasm throughout the medical world for better and safer methods of analgesia and anesthesia the above subject was of particular interest to every member.

HENRY KOERT DUBOIS

Dr. Henry Koert DuBois, 83, pioneer physician of Volusia County, died at his home in Port Orange at 5:15 p. m., September 9, 1930, following a long illness. Dr. DuBois was born in Milwaukee, Wisconsin, August 31, 1847, and with his parents, moved to Bangall, New York. He was educated at Columbia University and served his internship at Bellevue Hospital, after graduating in 1870. He served as New York City physician for 10 years. Breaking down in health, he came to Volusia County in 1881, and located in DeLand. In 1887, he was married to Miss Florence Bracey, daughter of the late Dr. H. D. Bracey, then residing at Beresford, west of DeLand, who survives with one son, Koert DuBois, Port Orange, and two grandchildren. He moved to Port Orange in the fall of 1887 and established a practice which extended over the entire county and as far south as Titusville, and which was covered by horse and buggy for many years.

Dr. DuBois was an active member of the Florida Medical Association for many years, serving as its president from 1896 to 1897. He, at different times, served as president of the Volusia County Medical Society. At the last annual meeting of the Florida Medical Association, Dr. DuBois was one of the first four on whom honorary membership was conferred. He retired from active practice only a few years ago when his health failed completely.

When Port Orange was incorporated in 1913, Dr. DuBois was elected its first mayor. He was a York Rite Mason, Daytona lodge, and a charter member of Independent lodge, Odd Fellows, St. Augustine. Dr. DuBois was appointed and served on the United States revising board of pharmacopeia, Washington, representing Florida physicians, for 30 years. The board meets once every 10 years.

The following resolutions were recently spread upon the minutes of the Leon-Gadsden-Liberty-Wakulla-Jefferson County Medical Society:

WHEREAS, it has pleased Almighty God to terminate the career of our esteemed associate

JOSEPH CORNELIUS INMAN,

who died August 9, 1930, and

WHEREAS, in the special field of Public Service in which Dr. Inman had elected to practice, his work was characterized by a scrupulous regard for responsibility, a most conscientious and thorough execution of all duties, and a capably directed exercise of an exact knowledge of medical science; and

WHEREAS, Dr. Inman, by virtue of his professional accomplishments and personal characteristics, won the highest appreciation, and inspired the warmest affection, of his associates:

Therefore be it resolved, That we, the members of the Second District Medical Society, hereby express profound regret that a career, marked with such promise of outstanding achievements, has been so suddenly ended; and

Be it further resolved, That this Resolution be entered upon the records of the Second District Medical Society as a token of the high esteem commanded by Joseph Cornelius Inman during his life; and as a memorial of the deep regret impressed upon us by his passing.

A very interesting meeting of the Leon-Gadsden-Liberty-Wakulla-Jefferson County Medical Society was held at Chattahoochee recently and a number of very interesting and instructive papers were read and discussed. Dr. W. C. McConnell of St. Petersburg was guest speaker and read a very interesting paper. The original articles have been placed in the hands of the Committee on Publication and will undoubtedly appear in the pages of this Journal at later dates. New officers were elected for the ensuing year which resulted as follows: Dr. J. F. Williams of Monticello as president, Dr. Wm. W. Massey of Quincy, vice-president, and Dr. O. G. Kendrick of Tallahassee as secretary-treasurer.

* * *

The United States Civil Service Commission announces open competitive examinations for Medical Officer, Associate Medical Officer, and Assistant Medical Officer. Applications for examinations must be on file with the United States Civil Service Commission, Washington, D. C., not later than December 30, 1930. These examinations are to fill vacancies in the Veterans' Bureau, Public Health Service, Coast and Geodetic Survey, Panama Canal Service, and Indian Service.

* * *

Dr. A. R. Haisfield of Pensacola recently attended the International Assembly of the Interstate Post-Graduate Association of North America held at Minneapolis, Minn.

* * *

Dr. Elmo D. French of Miami has just returned from a visit to Europe after attending the Eighth International Congress of Dermatologists at Copenhagen. Clinics were attended at London and Paris before returning to the United States.

* * *

EXPERIENCED TECHNICIAN, qualified in all laboratory and X-ray technique. Hospital and clinical experience. B. S. Degree. Best references. L. T., care Florida Medical Association, Box 81, Jacksonville.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912,

of THE JOURNAL OF THE FLORIDA MEDICAL ASSOCIATION, INC., published monthly at Jacksonville, Florida, for October 1, 1930.

STATE OF FLORIDA, } ss.
COUNTY OF DUVAL. }

Before me, a Notary Public, in and for the State and county aforesaid, personally appeared Shaler Richardson, M.D., who, having been duly sworn according to law, deposes and says that he is the editor of the JOURNAL OF THE FLORIDA MEDICAL ASSOCIATION, INC., and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Name of Publisher, Florida Medical Association, Inc. Post office address, Box 81, Jacksonville, Fla.

Editor, Shaler Richardson, M.D. Post office address, Box 81, Jacksonville, Fla.

Managing Editor, None.

Business Manager, Stewart G. Thompson, D.P.H. Post office address, Box 81, Jacksonville, Fla.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.) Florida Medical Association, Inc. (A Corporation not for profit—no stockholders).

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest, direct or indirect, in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is _____ (This information is required from daily publications only.)

FLORIDA MEDICAL ASSOCIATION, INC.,

By Shaler Richardson, Editor.

Sworn to and subscribed before me this 25th day of September, 1930. S. G. Thompson,

(SEAL)

Notary Public State of Florida at Large,
(My commission expires April 9, 1932.)

Form 3526—Ed. 1924.

NOTE.—This statement must be made in duplicate and both copies delivered by the publisher to the postmaster, who shall send one copy to the Third Assistant Postmaster General (Division of Classification), Washington, D. C., and retain the other in the files of the post office. The publisher must publish a copy of this statement in the second issue printed next after its filing.

Fifty-Eighth Annual Meeting
FLORIDA MEDICAL ASSOCIATION
Orlando—May 12-13, 1931

THE WOMAN'S AUXILIARY PAGE

WOMAN'S AUXILIARY
TO THE
FLORIDA MEDICAL ASSOCIATION, INC.

State Editor

MRS. EDWARD JELKS,
2214 St. Johns Avenue
Jacksonville

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MRS. J. E. TAYLOR, Secy.-Treas.	DeLand

REASONS FOR ORGANIZING A WOMAN'S AUXILIARY

The idea of forming a Woman's Auxiliary to the medical organization was born in the brain of a Texas woman, the wife of a physician, about eleven years ago. Following that suggestion, and with the approval of the American Medical Association, the nucleus was formed of what is now the Woman's Auxiliary to the American Medical Association. This organization is today composed of about 35 state auxiliaries, which in turn are made up of county organizations.

One may ask, what specific work awaits such a local organization? This question was splendidly answered by a speaker at a meeting of the New Jersey state auxiliary, who had the following to say: "The state medical society is now conducting a campaign of public education in medical matters, making use of the radio, moving pictures, newspapers, and pamphlets for broadcasting information in the line of preventive medicine, and supplying speakers to address lay organizations upon the prolongation of life through the safeguarding of health. You can help materially in furtherance of this program by supplying speakers to address Women's Clubs or by securing engagements for speakers from the medical society.

"It not infrequently happens that bills are introduced into our municipal, state, or national legislative halls, which, if enacted into law, would seriously menace the public welfare. On the other hand, desirable health legislation often languishes for want of public appreciation and support. Without becoming 'politicians,' in the objectionable sense of the word, you can wield considerable

influence for good, through organized opposition to bad acts or through support of good bills. The medical profession is not seeking enactment of any special or selfish legislation, and will merely ask your aid in protecting the health interest of the community.

"When women accompany their husbands or sons or brothers to state or national medical society meetings, they too often feel that they are *with*, but not *in*, the 'party.' You can, if you wish, effect a closer tie with your professional relatives and become more a real partner in their pleasures and their work.

"Your influence can aid very materially in making medical society meetings more enjoyable; the doctor generally has too much work and too little play; you can bring to these scientific conferences a social factor that will make them more truly recreational in character."

A. M. A. GUIDANCE

The American Medical Association authorized the Trustees to appoint a "liaison committee" to guide the Woman's Auxiliary in its policies. That committee, including in its make-up some of the most distinguished members of the medical profession, gave the following reasons, among many, why women's auxiliaries to medical societies should be formed:

"To organize for the purpose of responding to any call from the medical profession and to do all the work assigned to it from time to time.

To promote closer social contact between the families of physicians.

To assist in lightening the burdens of humanity.

To help preserve the health of the people.

To outline programs on health, approved by the Liaison Committee, to be presented before other organizations.

To recommend to all clubs that they place capable physicians' wives in charge of club health departments, in order to secure authoritative programs.

To secure, if possible, moving pictures to illustrate the importance of the annual physical examinations by the family physician. Each member of every household, servants included, should be examined.

To assist in providing health talks over the radio by prominent physicians and health officers.

These speakers should be appointed by the county medical society.

To continue our efforts to place Hygeia in every home, as it is the leading health magazine of the United States and is published by the American Medical Association."

PINELLAS COUNTY

The Pinellas County Auxiliary held its fall meeting on the evening of October 17, at the same time and in the same building in which the County Medical Society held its regular meeting. In this way, after adjournment of both meetings, there was an opportunity for physicians' families to become acquainted. An enthusiastic meeting was reported.

VOLUSIA COUNTY

The Auxiliary to the Volusia County Medical Society held its first meeting of the season on the evening of October 21, at the Ocean House, New Smyrna. There was a very good attendance and prospects of interest for the year. The members are planning to give the men a Thanksgiving bridge party. The President appointed Mrs. Wells of Daytona Beach (our state president), Chairman of Publicity for Volusia county.

DUVAL COUNTY

The last meeting of the fiscal year, of the Duval County Auxiliary was held on the morning of October 2, at the Jacksonville Chamber of Commerce. The President, Mrs. Driskell, called on Mrs. Gordon Ira for a report of the National Auxiliary meeting, which she attended in Detroit this summer. Mrs. Ira's report was most interesting. She reported the appointment of one of our members, Mrs. Herrman Harris, to the National Hygeia committee, following her nomination by Mrs. Wells, of Daytona Beach. Mrs. Ira closed her report by complimenting our state President, Mrs. Wells, upon the efficient manner in which she represented the Florida Auxiliary at the National Convention in Detroit.

Following Mrs. Ira's report, Dr. Blachly, Director of the Bureau of Hygiene for the state, gave a most interesting address on public health education.

An election resulted in the following officers: President, Mrs. William Kirk; Vice-President, Mrs. Horace Drew; Secretary, Mrs. E. W. Veal; Treasurer, Mrs. S. R. Norris.



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COUNTY SOCIETY	SECRETARY	MEETINGS				Dues Paid.
		Date	Time	Place	Luncheon?	
Alachua	J. E. Maines, Jr., M.D., Gainesville.	2nd Tuesday	12:00 Noon	White House	Yes.	88%
Bay	Don S. Fraser, M.D., Panama City.					50%
Brevard	I. K. Hicks, M.D., Melbourne.	3rd Tuesday		Varies		91%
Broward	Ralph Lingeman, M.D., Ft. Lauderdale.	2nd Tuesday	8:00 P.M.	Chamber of Com- merce	No.	86%
Columbia	T. H. Bates, M.D., Lake City.	1st Monday.	7:30 P.M.	Blanche Hotel		73%
Dade	E. N. McKenzie, M.D., Miami.	1st Friday	8:30 P.M.	Club Room, Huntington Bldg.	Occasionally.	91%
DeSoto-Hardee- Highlands ...	H. V. Weems, M.D., Sebring.		8:00 P.M.	Varies	Yes.	93%
Duval	Kenneth A. Morris, M.D., Jacksonville.	1st Tuesday	8:15 P.M.	Chamber of Com- merce Building	No.	85%
Escambia	J. M. Hoffman, M.D., Pensacola.	1st Tuesday	8:00 P.M.	Board of Health Building	No.	92%
Hamilton	J. R. Bruce, M.D., Jasper.					100%
Hillsboro	J. T. Cowart, M.D., Tampa.	1st and 3rd Tues- days	8:00 P.M.	Tampa Municipal Hospital	No.	84%
Jackson	C. H. Harrison, M.D., Cottondale.	2nd Tuesday	3:00 P.M.	Marianna	No.	69%
Lake	W. L. Ashton, M.D., Umatilla.	1st Thursday	12:30 P.M.	Eustis	Yes	100%
Lee	H. Quillian Jones, M.D., Ft. Myers.	3rd Friday	7:30 P.M.	Lee Memorial Hospital	No.	83%
Leon-Gadsden- Liberty- Wakulla- Jefferson	O. G. Kendrick, M.D., Tallahassee.	Quarterly	3:00 P.M.	Varies	Yes.	86%
Madison	Geo. O. Davis, M.D., Madison.					
Manatee	A. Q. English, M.D., Manatee.	1st and 3rd Tues. Oct. to May; 2nd Tues. May to Oct.	7:00 P.M.	Dixie Grande Hotel	Yes.	92%
Marion	Thos. H. Wallis, M.D., Ocala.	3rd Thursday	12:30 P.M.	Marion Hotel	Yes.	91%
Monroe	W. R. Warren, M.D., Key West.	1st Sunday	9:00 P.M.	Varies	Yes.	
Orange	J. R. Chappell, M.D., Orlando.	3rd Wednesday	8:30 P.M.	Varies	No.	85%
Palm Beach ...	R. G. Lewis, M.D., W. Palm Beach.	2nd Monday	8:00 P.M.	Court House	Yes.	79%
Pasco- Hernando- Citrus	Geo. R. Creekmore, M. D., Brooksville.	2nd Thursday	7:00 P.M.	Varies	Yes.	87%
Pinellas	O. O. Feaster, M.D., St. Petersburg.	Every other Friday	8:00 P.M.	500 Power & Light Bldg.	No.	84%
Polk	Herman Watson, M.D., Lakeland.	2nd Wednesday in Feb., Apr., June, Aug., Oct., Dec.	1:00 P.M.	Lakeland	Yes.	95%
Putnam	E. W. Warren, M.D., Palatka.	2nd Thursday	7:00 P.M.	James Hotel, Palatka	Yes.	64%
St. Johns	A. C. Walkup, M.D., St. Augustine.	3rd Tuesday	8:30 P.M.	Varies	Yes.	86%
St. Lucie-Okeech- bee-Indian River-Martin ..	C. L. Davis, M.D., Okeechobee.	3rd Thursday	8:00 P.M.	Varies	Yes.	100%
Sarasota	F. C. Metzger, M.D., Sarasota.	2nd Tuesday	8:30 P.M.	Varies	Occasionally.	75%
Seminole	J. T. Denton, M.D., Sanford.	2nd Friday	8:00 P.M.	City Hospital		100%
Sumter	W. E. Mitchell, M.D., Coleman.	2nd Tuesday		Varies	No.	100%
Suwannee	W. C. White, M.D., Live Oak.					83%
Taylor	R. J. Greene, M.D., Perry.	Last Thursday	12:15 P.M.	Eldorado Cafe	Yes.	60%
Volusia	J. Ralston Wells, M.D., Daytona Beach.	2nd Tuesday	7:30 P.M.	Varies	Yes.	87%
Walton- Okaloosa	A. G. Williams, M.D., Lakewood.	3rd Thursday	8:00 P.M.	Varies	Occasionally.	100%
Washington- Holmes	H. A. McClure, M.D., Chipley.					56%

NOTE—Secretaries: Please submit information to complete the above schedule.

TUBERCULOSIS ABSTRACTS

A REVIEW FOR PHYSICIANS

ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

IN MAKING a physical examination of the chest, the general practitioner should be able to arrive, at a correct diagnosis or conclusion in nine-tenths of the cases. Yet it is common experience that many cases of tuberculosis remain undiagnosed long after that should have been possible by the means now at our command. This unfortunate situation is due largely to the unsatisfactory method of teaching physical examination technique to the medical student and to the far too complicated treatment of the subject in our textbooks. Such is the opinion of James Alexander Miller, who in the foreword of "Procedure in Examination of the Lungs" by Arthur F. Kraetzer commends this little book as a "real contribution in simplifying the methods involved." Brief abstracts of the book follow.

PROCEDURE IN EXAMINATION OF THE LUNGS

Conventional teaching of physical diagnosis is deductive. It starts with general principles and works down to the specific. Actual examination of a patient is inductive. It begins with the gathering of particular findings and then works upward to an inductive conclusion. Of course, the student must visualize the entire field of possibilities; he must have a descriptive knowledge of disease, but the development of a good examination technique is best acquired by the inductive method. The author follows this plan in his book, reproducing the actual steps taken in the clinic to gather the facts of an individual case and to deduce therefrom the causative condition or pathology. Chest diagrams amplify the text.

He says: "Nothing in Medicine is worse done than the early diagnosis of tuberculosis, and one of the factors that contributes to this is, I am sure, the unnaturalness and obscurity of early training. Not only the method, but also the matter, is vague. Nothing could be more confused, for example, than the classical and utterly obsolete classification of rales. The terms crepitant and subcrepitant are entirely ambiguous. They have no place in modern clinical terminology."

SYSTEMATIC PRACTICE NECESSARY

In learning to distinguish the characteristics of chest sounds as revealed by percussion and auscul-

(Continued on page 242)

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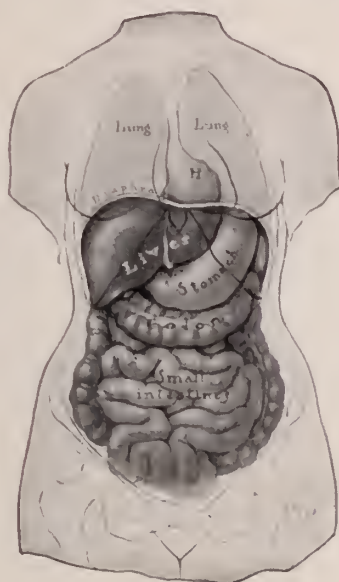


Figure A



Figure B

POSITION AND RELATIONSHIP OF THE VISCERA
IN THE FEMALE

Figure A — Normal female figure.

Figure B—Visceroptosis (abdominal ptosis, Glenard's disease, enteroptosis); position of colon, lying behind the stomach, indicated by dotted line.

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Rahway, N. J.

tation, it is well to practice leisurely and patiently on a willing, normal subject. Four topographical points are selected for comparison in the following order:

1. A point rather low in the right axilla (gastric tympany and heart sounds on the left may cause confusion).

2. The left supra-clavicular region.

3. The right, supra-clavicular region.

4. The side of the neck.

In percussion, the resonance or duration of sound is easily detected by asking, "Which sound lasts longer?" Determining the pitch of the percussion note is somewhat more difficult, especially for ears not delicately attuned. However, unmusical ears can learn to detect differences by trying to "sing" the sound elicited. The student should also remember that the duller of two notes is always the higher pitched. When the differences in resonance in the four points selected are distinguishable to the student, he begins to hear more subtle shadings.

In auscultation, the four selected points are compared for (a) intensity, or rather, loudness (one does not have to be a Laennec to determine that); (b) length of respiratory sound (which is quite as easy); (c) pitch of respiratory sound, being careful not to mistake intensity for higher pitch; (since loud sounds and those of high pitch are more readily heard than less loud sounds and those of less low pitch, it is easy to fall into the error of concluding that a loud sound is of high pitch, whereas it may actually be lower pitched); (d) the quality of breath sounds, such as that like the gentle rustle of microscopic leaves (vesicular) as heard well at point one, and at the other extreme the hollow tracheal sound as heard at point four. When the several differences and combinations of these qualities are mastered, the student learns to "synthesize" them in terms of the physiological and anatomical structures that give the sounds their characteristics.

With this preliminary mastery of the sounds of the four selected points of the normal chest, the student is next introduced to the study of the entire chest. Inspection comes first; in addition to general appearance, there are certain conditions which must be specifically looked for, such as the position of the trachea, the pitch of the chest, and clubbing of fingers. Then follows palpation, which includes tactile fremitus. Percussion is next pur-

(Continued on page 244)

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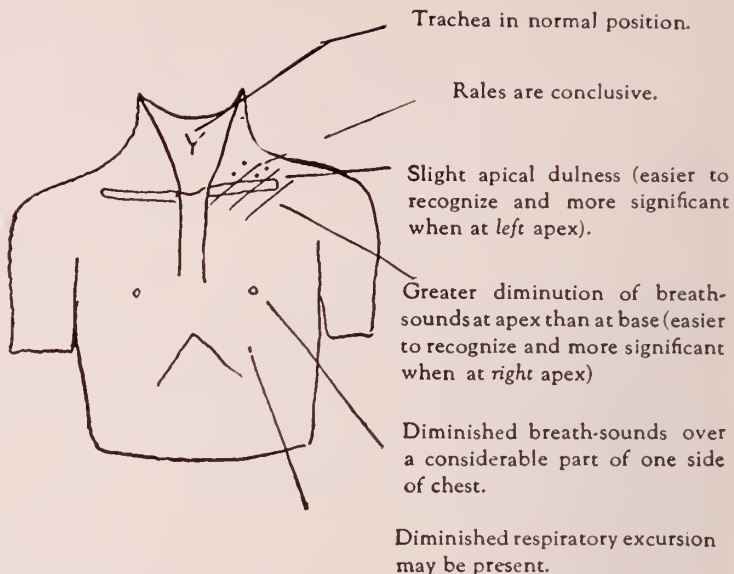
sued systematically and always by comparing one side of the chest with the other.

RALES AND THEIR MEANING

The four succeeding chapters are devoted to auscultation, including one exclusively on rales. The author deplores the "strained effort to endow a particular rale with a specific and invariable significance," which has caused so much confusion in diagnosis. The most general and, at the same time, accurate statement he is willing to make about rales is that they represent either inflammation or transudation, which includes "about all that can happen to a lung." To interpret the meaning of rales, he recommends the following three criteria; namely, the consideration of:

1. All the data that have gone before under symptoms, inspection, palpation, percussion, and changes in breath-sounds.

(Continued on page 246)



1. Diminished breath-sounds over a considerable part of one side.

A. The area of diminished breath-sounds is resonant (except perhaps at the apex).

1. The patient is not in pain and is not dyspnoeic.

Diagnosis: Without apical rales tuberculosis is suggested. With apical rales, tuberculosis is certain.



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DR. ALBERT F. BRAWNER, Resident Physician.

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Mead's Viosterol in Oil, 250 D (Steenbock method)—in normal dosage—is clinically demonstrated to be potent enough to prevent and cure rickets in almost every case. Like other specifics for other diseases, larger dosage may be required for extreme cases. It is safe to say—based upon extensive clinical research by authoritative investigators (reprints on request)—that when used in the indicated dosage, Mead's Viosterol in Oil, 250 D is a specific in almost all cases of human rickets, regardless of degree and duration, as demonstrated serologically, roentgenologically and clinically.

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PREVENTS AND CURES RICKETS

2. The geography of the rales, whether at the top, hilum, base, or some intermediate and unclassifiable area of the lung; whether unilateral or bilateral; whether localized or generalized; whether few or many.

3. The actual type of rale itself, whether dry, moist (fine, medium or large), sibilant or sonorous.

A fourth and often essential criterion is the X-ray. These criteria are carefully elaborated and described.

"SIGNS" OF TUBERCULOSIS

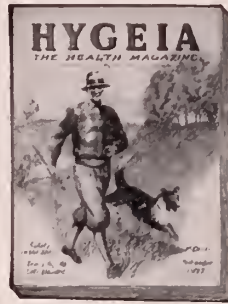
Chapter XI on "The Signs of Tuberculosis" bears as a sub-heading the scriptural quotation: "A wicked and adulterous generation seeketh after a sign, and there shall no sign be given unto it."



Four points are selected for comparative practice.

This sentence, he says, is highly applicable to the diagnosis of tuberculosis. A positive sputum is the only sure sign of tuberculosis, but finding tubercle bacilli in the sputum is not diagnosing tuberculosis in the modern sense of discovering the process in its early stages and in the minimum of time. Tuberculosis is diagnosed by a skilled technique plus a peculiar synthetic discipline of the mind. This harmonizes with the observation of Miller, who in the foreword says: "Physical signs are by no means always the most important evidence in making a diagnosis of pulmonary tuberculosis. In many, if not the majority of cases, the diagnosis should be suspected at least, if not really made, from the history alone, and in so many cases does it occur that physical signs are very scanty or absent or perhaps not pathognomonic, that if a student or physician acquires a habit of relying upon physical signs for diagnosis, many mistakes will result."

(This review secured by the Florida Public Health Association from the National Tuberculosis Association).



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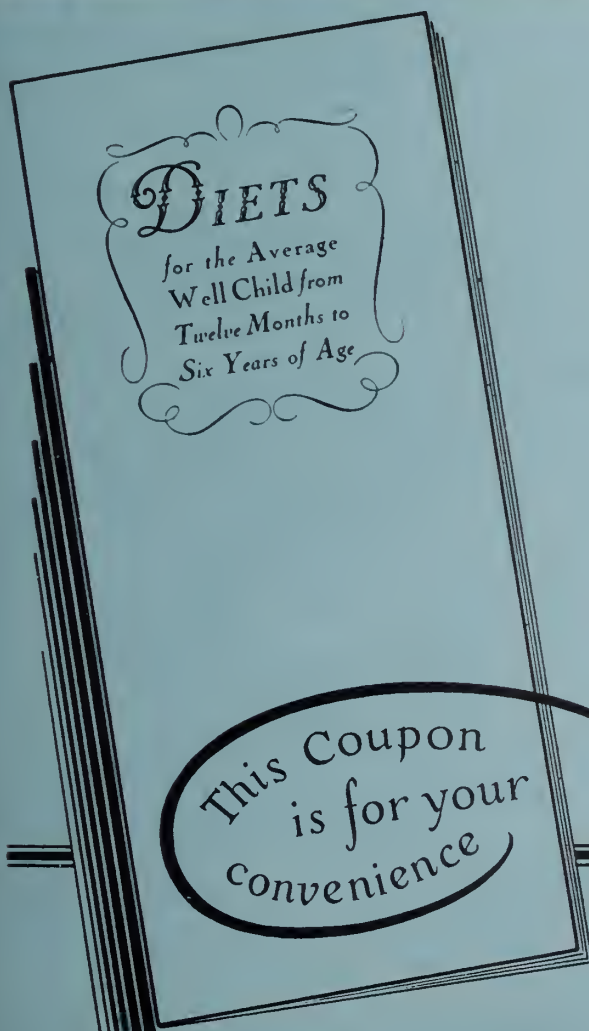
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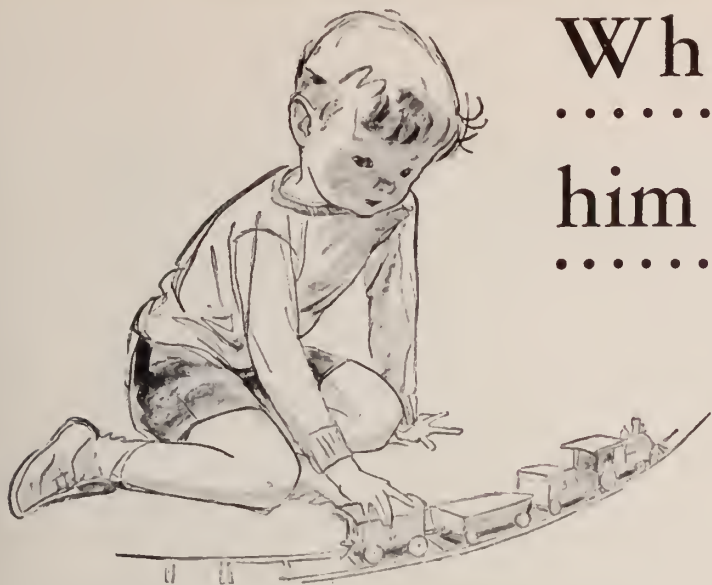
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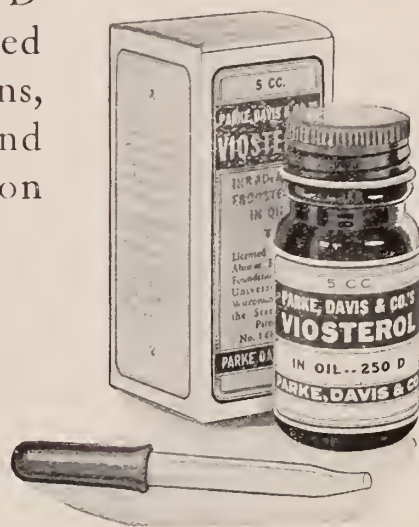
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Number 6

PER-ORAL ENDOSCOPY WITH REPORT OF CASES*

J. W. TAYLOR, M.D.,

and

S. B. FORBES, M.D.,

Tampa.

The field of per-oral endoscopy has broadened a great deal in the past few years. We not only have the removal of foreign bodies from the food and air passages but the diagnosis and treatment of certain diseased conditions, more particularly lung abscesses.

In this paper we are not going into a highly technical discussion of the diagnosis of a foreign body in the food and air passages. These cases usually are in young children. The patient may have been seen playing with some object that is now missing. The most important initial symptoms are choking, gagging, coughing and wheezing often followed by a symptomless interval. A laryngeal foreign body may show one or more of the following symptoms: hoarseness, croupy cough, aphonia, wheezing, dyspnea, odynophagia, cyanosis and apnea. An obstructive foreign body in the larynx may be quickly fatal. A tracheal foreign body may often show coughing, hoarseness, dyspnea and cyanosis.

Diagnosis of a tracheal foreign body is by Roentgen-ray, auscultation, palpation and bronchoscopy. There are three very valuable signs of tracheal foreign bodies:

1. The asthmatoïd wheeze, heard with the ear or stethoscope bell at the patient's open mouth and not at the chest wall.

2. The audible slap, also heard at the open mouth due to the sudden arrest of the foreign body by the subglottic narrowing during nature's expiratory attempt at expulsion of the intruder.

3. The palpatory thud, elicited by placing the thumb on the trachea in the suprasternal notch.

Bronchial foreign bodies have the same initial symptoms at once or after a symptomless interval. We may have cough, blood-streaked sputum, metallic taste or special odor of foreign body. Non-obstructive foreign bodies afford few signs and symptoms for weeks or longer. Vegetal,

organic foreign bodies cause at once as a rule a violent laryngo-tracheo-bronchitis with profound toxemia, irregular fever, cough and profuse secretion. Metallic foreign bodies and bones after months or years produce all symptoms of a chronic pulmonary abscess or bronchiectasis such as emaciation, chills, fever, sweats, foul expectoration, clubbed fingers, etc.

It is well to bear in mind that a foreign body lodged in the esophagus may present many signs of a bronchial foreign body, either by the esophageal obstruction causing an overflow of liquids and solids into the larynx where they are aspirated into the lungs or by producing a tracheo-esophageal fistula. The most important physical signs of foreign body in the bronchi are:

1. Decreased vocal fremitus.
2. Impaired percussion note.
3. Diminished intensity of breath sounds distal to the foreign body.
4. Limited expansion when present.

We may have an obstructive emphysema distal to the foreign body or an obstructive, compensatory emphysema on the other side.

A complete obstruction of a bronchus is followed by a drowned lung, which may be confused with an empyema. Rales are more intense in the uninvaded side in a complete obstruction. In partial obstruction, they are heard in the invaded side distal to the foreign body, posteriorly and are often more intense in the region of the foreign body. Early in a foreign body case, it may be confused with pneumonia, but the decreased vocal fremitus and the diminished breath sounds and decreased or absent vocal resonance along with the absent tubular breathing should exclude the pneumonia diagnosis.

Unfortunately, there is no one set of physical signs that covers all cases. The Roentgen-ray is our most valuable aid to diagnosis. Good X-ray work will show all metallic foreign bodies and many of less density. The X-ray examination should in all cases include the entire anatomy from the naso-pharynx to the tuberosities of the ischia. Vegetal foreign bodies cause an obstructive emphysema in the invaded side. At the end of expiration, the heart and the mediastinal wall move over to the uninvaded side and the affected

*Read by title before the 57th Annual Meeting of the Florida Medical Association, Pensacola, May 6, 7, 1930.

lung becomes less dense than the other one. The diaphragm is flattened, depressed and makes less excursion on the affected side.

In an obstructive atelectasis resulting from the main bronchi being completely blocked, we get a moving over of the mediastinal structures to the affected side and they stay there; that is, they do not move sidewise with respiration as in an obstructive emphysema. In these cases, we have a compensatory emphysema in the uninvaded lung due to the fact that the involved lung is not functioning.

The fluoroscope is a very important aid in diagnosis.

Esophageal foreign bodies may cause dysphagia, odynophagia, and even aphagia with regurgitation of ingested material. We may have hematemesis. There is frequently an elevation of temperature. We may have symptoms referable to the air passages as mentioned before.

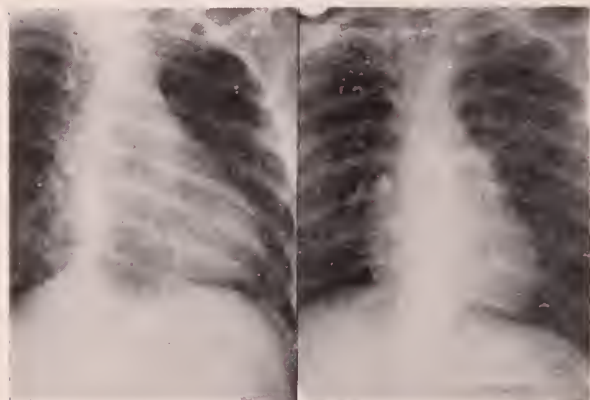
It is astounding how the esophagus will tolerate foreign bodies at times. We have had two cases of foreign bodies in the esophagus for six weeks with very few symptoms. Of course the disc-shaped bodies are the ones that permit fluids and even soft foods to pass into the stomach. Flat

We are not going into the technique for the removal of foreign bodies except to add that the rules laid down by Chevalier Jackson are followed.

The diagnosis and treatment of pathological conditions of the larynx and lower respiratory tract has become a very common procedure in endoscopy. Direct inspection of the larynx is



Case No. 5. Red fish scale in upper esophagus. Right shows barium ledge directly after ingestion. Left shows ledge remaining 24 hrs. later.



Case No. 2. Tooth in right main bronchus having appearance of calcified gland.

esophageal foreign bodies always lie with the greatest diameter in the coronal plane of the body while in laryngeal and tracheal foreign bodies the greatest diameter is in the sagittal plane. In esophageal foreign bodies non-opaque to the ray, it is necessary to give an opaque mixture, usually barium. In making the roentgenograms, the lateral and anterior posterior positions are necessary. Contrary to general belief, esophagoscopy is a more formidable procedure than bronchoscopy due to the fact that the esophagus is a collapsed tube with a very thin wall.

very simply done in children, no anesthesia being necessary; in adults, local anesthesia always suffices. Small neoplasms are removed through the laryngeal speculum. Specimens are taken for microscopic sections. Various topical applications, cauterizations, etc., are easily accomplished.

Bronchoscopy in disease is not any more difficult than foreign body extractions. By far, the most frequent condition that a bronchoscopist is called in consultation for is the lung abscess. The small abscess of the lung, not too peripherally placed, in the lower lobes are the ones more amenable to treatment endoscopically.

In this work, lung mapping by roentgenograms made after the injection of lipiodol in the abscess area is of great aid in determining the size and location of the abscess. The lipiodol seems to exercise some bactericidal action also. In the first treatment following the mapping, the abscess area is evacuated by suction as thoroughly as possible. We then inject mercuraphen solution, 1-8000. The mercuraphen solution is injected into the abscess cavity, if possible, or into the connecting bronchus. This is now sucked out. Another time the mercuraphen solution is injected but this time no suction is used. In these procedures, the swollen and narrowed bronchi leading to the abscess are gently dilated.

In bronchiectasis, the results are not so favorable. However, considerable benefit has resulted



Case No. 7. Abscess lower lobe left lung. Left shows condition one month after last bronchoscopic treatment.

from endobronchial lavage and injection. Lung mapping is invaluable in this type of work, also. Small neoplasms of the tracheo-bronchial tree have been removed bronchoscopically but here the field is very limited; however, specimens may be taken for pathological study.

Good reports have been made on the bronchoscopic treatment of asthma; however, this work is still in the more or less experimental stage.

Esophagoscopy in disease is practiced in a great many conditions. The most frequent condition encountered is cicatricial stricture due to the ingestion of lye. Other rather frequent conditions are cardiospasm and other spasmodic strictures. Dilatations, both local and diffuse, are occasionally met. Compression stenosis is sometimes seen. Ulcerations and erosions, some benign and others malignant, are seen. Rarely, we see cases of simple, acute and chronic esophagitis. There are many other esophageal conditions encountered but they are the rarer ones.

In esophagoscopy for disease, the ingestion of a radio opaque substance is of inestimable value, studying its passage through the chest with the fluoroscope and roentgenograms. A barium salt is usually used.

CONCLUSION

1. Take your time in studying each case. Use all diagnostic methods available and do not be in

too great a hurry to use the bronchoscope before this is done.

2. No anesthetic is required in children. Frequently, it is well to administer a hypodermic injection of morphine and atropine in children as well as adults one-half hour prior to the operative procedure. A general anesthetic will defeat your purpose in most cases, whether a child or an adult.

3. Team work is most essential for success.

4. Work rapidly but carefully. Do not keep patient on table too long; fifteen minutes should be the limit for a child; in the case of an adult, it is safe to work longer.

5. Most lower lung abscesses should have bronchoscopic drainage before resorting to surgical measures.

We have a few slides typical of cases that have come up from time to time in the average practice.

CASE REPORTS

Case No. 1.—Child, E. B.; age, 32 months. While eating peanuts, suddenly gagged and coughed. Had had very few symptoms since then except for some cough and increased temperature. Roentgenogram showed right lower lobe obstructive emphysema. This case is unusual as there was practically no local reaction to the peanut. Practically one-half of an unparched peanut was removed from right lower lobe bronchus. Time, 4½ minutes. Recovery, uneventful.

Case No. 2.—Child, J. P.; age, 4 years. Definite history of swallowing coin. Coin lodged in usual place at the crico-pharynx. Removed with more difficulty than in the average foreign body case in this region as it was very easily overridden. Time, 6 minutes.

Case No. 3.—Child, J. P.; age, 4 years. Definite history of swallowing a foreign body. Lodged in upper third esophagus. Removed with some difficulty. It was a corner protector for wooden drawers. Time, 5½ minutes.

Case No. 4.—Child, M. M.; age, 4 years. History of swallowing a pin. Roentgenogram showed an open safety pin point down in upper esophagus. Removed. Time, 8 minutes.

Case No. 5.—Adult, I. S.; age, 50 years. While eating baked fish, swallowed something which seemed to lodge in chest. Had immediate pain over sternum referred to back between shoulder blades and over right axillary region. Roentgenograms showed nothing on plain film. On ingestion of barium, a definite foreign body was located in upper third of esophagus. Patient refused removal on first day. Another plain film made on the next day showed a barium ledge in same area as before. Removal of a very large red fish scale was made. Time, 3 minutes.

Case No. 6.—Adult, M. W.; age, 20 years. Stricture of mid and lower esophagus. This patient had had many dilatations of esophagus by various men. Note the dilatation above the stricture.

Case No. 7.—Adult, I. R.; age, 19 years. Influenza one month before followed by prolonged temperature, chills, sweats and profuse expectoration. Small abscess we found in lower lobe of left lung. This patient's condition improved markedly after bronchoscopic aspiration and lavage. Two treatments were given at four day intervals and recovery was rapid.

Case No. 8.—Adult, N. L.; age, 40 years. Influenza three months before followed by sweats, chills, profuse expectoration and progressive emaciation. Abscess discovered in lower lobe of left lung. Two bronchoscopic treatments given with marked improvement. Patient unable to return so subsequent course not known. Lipiodol introduced in this case with a cannula instead of the bronchoscope.

Case No. 9.—Adult, I. H.; age, 20 years. History of progressive hoarseness and at times loss of voice. Papilloma of larynx, broad, flat type just above left cord. Removed under local anesthesia with follow-up treatments of topical applications

of saturated solution of potassium bichromate. Result in this case left nothing to be desired.

Case No. 10.—Adult, P. E.; age, 40 years. Hoarseness with occasional loss of voice. Small white tumor removed from larynx just anterior



Case No. 15. Glass bead in right main bronchus. Left shows chest on expiration. Right shows chest on full inspiration.

to left arytenoid. This was a chondroma and up to date (six months later), has shown no tendency to recurrence.

Case No. 11.—Child, J. Y., age, 11 years. Was admitted to the Bayside Hospital with the history that while attempting to extract a second bicuspid it was aspirated into the trachea. Radiogram showed tooth in lower right main bronchus. Internist reported a partial blockage of right lung. Bronchoscopic removal in ten minutes. The time was prolonged due to the enamel part of tooth presenting and the forceps would slip off very easily. No anesthetic, local or general. Patient returned to home in Inverness at end of forty-eight hours.

Case No. 12.—Child, R. B.; age, 18 months. Button in esophagus. History: four months previous it was thought that the child had swallowed a button. X-ray was made but no foreign body was located. The child was living in the northern part of the state at this time. Later moved to Tampa. At the Children's Hospital, more X-rays were made. The button was located by using barium. No anesthetic was used. A large black horn button about the size of a quarter was removed with esophageal speculum and straight forceps. Time, one minute. Button was no worse for wear after a sojourn in the esophagus for four months. However, it had caused a tracheo-esophageal fistula due to pressure necrosis and the child died a few days after removal of the foreign body.

Case No. 13.—Child, A. B.; age, 4 years. Aspirated a grain of corn. When first seen, the for-

eign body was evidently in the trachea. During the time the radiograms were being made the paroxysms were so great that the child would become exhausted from coughing. This was evidently due to the grain of corn moving up and down in the trachea, but later it moved down into the right main bronchus as physical examination the next day showed partial blocking of right lung, and on bronchoscopy the foreign body was found in lower right main bronchus. Removed in four minutes. No anesthetic. Recovery, uneventful.



Case No. 17. Obstructive emphysema seen in right lung.

Case No. 14.—Child, D. B.; age, 7 months. Sand-spur in larynx. Location below cords, anterior. We only report this case to show that a general anesthetic for any air passage or esophageal work is not necessary and, on the contrary, is a handicap. Another physician had attempted removal under general anesthetic, but failed to get the foreign body, probably due to excessive mucus secretion produced by the ether. Sand-spur removed, using anterior commissure laryngoscope and straight forceps. Time, two minutes. No anesthetic, local or general.

Case No. 15.—Child, M. S.; age, 6 years. Came into hospital with history of having aspirated an imitation pearl bead. Was seen by one of the internes who stated that she was now feeling very well and asked if he might send her home. A physical examination had not been made. An X-ray was advised which showed the bead beautifully. A physical examination revealed the most complete blockage I have ever listened to. The bead being round, acted as a ball to completely block the right main bronchus on inspiration. Child was bronchoscoped the same day. Bead was located in right main bronchus about an inch and a half below the bifurcation. Removal in less than three minutes. No anesthetic, local or gen-

eral. The difficulty in this case was not to use too much pressure and crush the bead.

Case No. 16.—Child, J. C.; age, 3 years and 9 months. Aspirated a watermelon seed thirteen days previous to bronchoscopy. In the meantime, pneumonia developed. The child was in the Children's Hospital for several days waiting for the pneumonia to subside before bronchoscopy. On the thirteenth day, the child still had increased temperature at time of removing foreign body. The watermelon seed was found in the right main bronchus. No foreign body could be seen at first, just a bronchus blocked with secretion and a fibrin exudate. This was cleaned out and the seed then removed. Time, ten minutes. No anesthetic, local or general.

Case No. 17.—Child, A. C.; age, 6 years. We were called in consultation on this case. The attending laryngologist would not agree to a bronchoscopy as the child was feeling very well. He had no symptoms other than those discovered by auscultation and there was a partial blockage on the right. Patient remained in the Children's Hospital a few days before being discharged. About a week or ten days later, a peanut was coughed up. We report this as a rare condition. Very few times will this happen; more often, if not removed early, pneumonia will develop.

FURTHER OBSERVATIONS ON THE USE OF RADIUM IN THE CONTROL OF SUBCUTANEOUS AND MUCOUS MEMBRANE HEMORRHAGE BY IRRADIATION OF THE SPLEEN*

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Irradiation of the spleen to control idiopathic hemorrhages has been reported from all parts by Watkins,¹ Neuffer,² Hoffman,³ Wolmerhauser and Eufinger,⁴ Nurnberger,⁵ Garcia-Donato,⁶ Shiohida,⁷ Goldmark and Jacobs,⁸ Pancoast,⁹ Schinz,¹⁰ Silberstein,¹¹ Schneider,¹²⁻¹³ and others reporting results in groups of cases, the hemorrhages taking place during the course of various conditions.

We are all familiar with the universal inefficiency of any one of the usual methods now in use to overcome these conditions. In the literature, we read case reports of excellent results attending the use of this or that chemical substance or serum, but the results are, usually, tem-

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porary in character. Transfusions have been the mainstay, that, usually, must be resorted to, but even here, after a temporary improvement, the condition may recur. I am not under-estimating the value of transfusions; on the contrary, I feel that they still must be used where the blood volume is very low, and must be resorted to under certain conditions which will be mentioned later in this paper.

I shall not burden you with a theoretical study of the disturbance of the normal factors in the coagulation of the blood, in these conditions. Suffice it to say that such authorities as Fonoio,¹⁴ Addis,¹⁵ Weil,¹⁶ Howell,¹⁷ Hess,¹⁸ Minot,¹⁹ Lee,²⁰ Wright²¹ and others have attempted to classify these changes, and conclude that the pro-thrombin and anti-thrombin are the factors that are most often abnormal. The purpose of this paper is to bring to your attention the case and universal application of this method and the excellent results which we have obtained in a relatively few cases. As yet, we have had no failures in all cases on which this method has been used, and with permanent results up to this time.

Radium is now regarded as the method of choice by most authorities, in controlling menorrhagia where no pathology can be demonstrated in the pelvic organs. We have regarded the results obtained in these cases as being due to the direct action of the radium rays on the pelvic organs and viscera, but we can well assume that part of the result may be due to the effect on the blood constituents rather than wholly a local effect.

Technic.—In all cases reported, 50 mgs. of radium were used; one 25 mg. silver capsule and two 12½ mg. gold needles. These were placed in a larger brass capsule. The irradiations were given directly over the spleen at a distance of one inch from the skin. The total dosage given will be mentioned in the individual reports. A heavy lead shield is placed over the part away from the body. This is very important in the case of children, where the arm or hand may rest on this outer portion and cause a severe radiodermatitis, were it not shielded with lead.

Case Reports.—In a previous communication²¹ we reported the results of the use of this method in cases of hemophilia, purpura hemorrhagica and hemorrhagic disease of the new born. These cases have continued in good health, without further treatment.

Case 1.—Mrs. K., age 20, married, no history of hemophilia in family. Since onset of menstru-

ation usual age, has had irregular profuse menstruation. This condition has become much worse since marriage about one year ago. Menstruation has been practically continuous, with intervals of only a few days of cessation. Dilatation and curettage three months ago. No pathological condition of pelvic organs found. No relief from symptoms. On November 16, 1929, 300 mg. hours of gamma radiation of radium was given over the spleen. Menstruation has been normal since.

Case 2.—Mrs. McD., age 35. Family history negative for hemophilia tuberculosis and cancer. Patient was admitted to the hospital on October 22, 1928, for cystoscopic examination with a history of hematuria of six months' duration. The bleeding was found to be from the left ureter. Pyelographic examination revealed a right hydro-nephrosis with right ureteral stricture. Examination of urine from left ureter revealed no acid fast bacilli. Guinea pig inoculations were negative on two occasions. The hematuria from the left kidney was controlled at intervals by the injection of silver nitrate. At these cystoscopic examinations, the right ureter was dilated. The left kidney was finally removed on November 8, 1929, because of the persistence of the hematuria and the failing general condition of the patient. Pathological examination of this kidney revealed a generalized amyloid degeneration of the kidney.

The patient remained well until about January 1, 1930, at which time the hematuria returned. Because of the good results obtained in the cases mentioned above, 400 mg. hrs. of splenic gamma radiation with radium was given on February 5, 1930. Since two days after the application the patient has remained well up to the present time.

Case 3.—H. S., age six. Admitted to hospital December 19, 1929, with the following history: family history negative; past history, severe hemorrhage January, 1929, following mastoidectomy, which necessitated transfusions. Had had several attacks of severe nose bleed since. Present illness: severe nose bleed for past 48 hours. Nasal packings and usual coagulants given without avail. 300 mg. hrs. of gamma radiation with radium given over spleen. Hemorrhages ceased a few hours after removal of the radium and there has been no recurrence up to this time.

A tentative diagnosis of hemophilia had been made by the attending physicians at the time of the first hemorrhages, which diagnosis was substantiated at the subsequent nose bleed attacks, which would sometimes last several days.

Contraindication.—There is but one contraindication that I can see possible, and that is that this method should not be used when the blood volume has become too low. By checking with blood studies immediately after the removal of the radium, we have found that there is a marked primary lowering of the total erythrocyte count. This is due to the hemolytic action of the rays. This hemolysis is followed by a rapid rise of the count in the next 48 hours. We consider that if the total erythrocyte count is below 1,000,000 that it is not safe to use this method and would first transfuse to bring the blood volume above that level.

I shall not attempt to explain scientifically the action of the rays in bringing about these good results as in some of the cases the bleeding time was increased, with a normal coagulation time; in others, the coagulation time was increased; in others, the blood platelets were diminished or absent before treatment. After treatment, these factors returned to normal, particularly in the cases in which the platelets were diminished or absent. Hematologists will probably be able to give us a scientific reason for these phenomena, when this method of treatment will be more generally used.

Conclusions.—I hesitate to recommend radiation of the spleen as an absolute curative agent in obscure hemorrhages as the number of cases, in my experience, is too few, but I would not hesitate to give it a trial in all cases, provided the blood volume is not too low. The ease of application and the lack of inconvenience to the patient surely recommend a trial by even the most skeptical, in these conditions where, very often, the usual methods are of little avail.

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15. *Addis: Footnote 1, second reference.* (Note) *Addis* believes that the abnormality of hemophilic blood is to be found in the property of the prothrombin, that it is altered in character so that it requires a longer time than normal for its activation to thrombin.
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17. Howell: *The Archives Int. Med.*, 1914, xiii, 76. (Note) Howell, however, was not able to find that his antithrombin was notably increased.
18. Hess: *The Archives Int. Med.*, 1916, xvii 203. (Note) The findings of Hurwitz and Lucas, Hess and our studies confirm Howell's findings in regard to antithrombin.
19. Minot, Denny and Davis: *The Archives Int. Med.*, 1916, xvii, 101. (Note) Refers to reclothing. Of some twenty-five observations on eight cases which have exhibited this phenomenon, none have shown an antithrombin content below one, while almost all the observations have shown an increase in antithrombin.
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DISCUSSION

Dr. E. H. Teeter, Jacksonville:

I have had quite a number of cases that we might call idiopathic hematuria. I have in mind one case I have cared for the last three years that starts up bleeding from the bladder with no symptoms at all. I cystoscope about twice and dilate ureters well which relieves the hematuria. Another case had hematuria, very excessive. I washed out the kidney pelvis, dilated the ureters, but he kept on passing blood for about one week and then stopped his hematuria and has been well ever since.

If this patient that Dr. Hoffman reported had stricture on one side, also very likely had stricture on other side. I think a great many of these cases are due to some ulcerative condition in the ureter.

Dr. W. C. Payne, Pensacola:

It was my privilege to work with Dr. Hoffman in several of these cases, and I saw practically all of them at some time during treatment.

This work, he did not know had been done else-

where. He thought that it was original, but when he investigated found other cases reported throughout the world. So far as I know there is no such series of cases reported for this particular kind of work.

Dr. Hoffman's idea originally was to use this radiation in cases of hemophilia and hemorrhage in the new-born, and cases of that kind, without using it in cases of hemorrhage from mucous membranes, hematuria, etc. However, one of the most interesting cases that I have ever had the privilege of treating was this case of hematuria, on which I worked with Dr. Hoffman. After treating her for two years with every known means and being unable to relieve her, we felt justified in removing the left kidney. She had had a stricture of the right ureter with resulting hydronephrosis. P. S. P. Test normal, both kidneys. After we had removed the kidney we felt rather badly, for it looked absolutely normal. But microscopic examination showed a generalized amyloid degeneration. After being removed from the hospital she began to bleed from the other kidney. It was rather discouraging. Dr. Hoffman then tried radium as a last resort, and all bleeding stopped two days later. She looks all right now, and appears to have her usual good health.

Dr. J. M. Hoffman, Pensacola (concluding):

We always strive to find the cause of hemorrhage if possible. These cases that I have presented were the ones in which we could find no cause.

In a number of these cases we found some trouble with blood constituents. Several have a very low blood volume. A striking thing in these cases is the absence of blood platelets before application. Now, we know that heavy radiation over the blood stream will cause hemolysis. Therefore, cases with a total red count of less than 100,000 should limit us in using that. We should first use transfusions to bring up the blood volume before we use radiation.

ANALGESIA AND ANESTHESIA IN OBSTETRICS*

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For many years the medical profession and the patient's family accepted the pain of parturition as an unavoidable evil, and little or no effort was made to relieve the sufferings of the laboring

woman. In the enlightenment of present-day methods, it seems very strange to find some doctors adhering to the ancient custom of administering a few inhalations of ether or chloroform as the child's head passes over the perineum. Stoicism in the midst of suffering is not very difficult, so long as the pain bears down on the other fellow.

We have all heard the statement that "pain never kills any one," and possibly it does not, as ordinarily experienced, but, pain does cause shock, and in that way lowers the vital resistance of the patient. Therefore, anything which relieves or modifies pain, acts to prevent shock. Grave shock is often the cause of immediate death. A woman who has passed through the ordeal of childbirth with a minimum amount of suffering—other things being equal—approaches the ideal state of "anociation," makes a more rapid recovery, is more fitted to resist exposure to infection, and better able to withstand its ravages when actually present. She is also in better condition to nurse her infant and supply it with a wholesome milk.

With this in mind, it has constantly been my endeavor to attain this end, and anything which sought the accomplishment of a "painless labor" was tried, providing it was originated by a competent authority and proven safe for both mother and child.

In the giving of chloroform, it is imperative to withhold its use until the end of the second stage, because, when given earlier it will retard or stop the labor, and when administered over a long period of time is not without harmful effects upon the heart, kidneys and liver of the mother, as well as dangerous to the unborn infant. Ether is so slow in its action as to necessitate an almost constant administration to secure relief from pain and it is contraindicated in all bronchial and kidney affections. Gas-oxygen seemed for a time to be the ideal method, and to-day is still invaluable when used as an analgesic. It can be given for two or more hours without any worry as to possible ill effects upon either the mother or child. It does not retard the progress of labor, but seems to slightly stimulate uterine contractions. After fifteen years' experience with the use of this general anesthetic, my principal objection is to the demand it makes upon the time of the obstetrician, or the added expense to the patient of employing an anesthetist. Gas is of no aid in relaxing the perineum. "Twilight Sleep" has had no place in my practice as I have never felt justi-

*Read before the Duval County Medical Society, Jacksonville, September, 1930.

fied in jeopardizing the life of the infant when the mother's pain may be relieved with safer methods to both. Local infiltration of the perineum with a solution of novocaine, obviously, yields no relief from the pain of uterine contractions, and has some potential liability as regards local infection.

Spinal anesthesia, combined with other means, is the greatest boon so far offered as a satisfactory solution of the pains of childbirth.

It is the intention of this paper to present for your consideration as well as your friendly criticism, the results of my experience with this anesthetic in over one hundred and forty cases. There is no claim for originality as to method, dose or particular drug used. Neither is it the intention to bore you with a lengthy repetition of the numerous articles written upon this subject.

The general plan of conduct is to carry the patient through the first and greater part of the second stages of labor with the Gwathmey synergistic analgesia. Any intelligent nurse may administer this treatment with every assurance of safety to the patient. As soon as it is indicated, a hypodermic of pantopon, instead of morphine, is given in two cubic centimeters of fifty per cent solution of magnesium sulphate. Later, when necessary, the dose of magnesium sulphate is repeated without the pantopon. As soon as the pain demands it, the first enema is given. This consists of a mixture of quinine, alcohol, ether and olive oil. The whole process may be repeated in long labors, if necessary, without ill-effects to mother or child. The only contraindications are colitis, true diabetes and auditory disturbances.

The intraspinal administration of a novocaine solution for the production of anesthesia, requires the services of a doctor and should not be entrusted to the nurse. Observing all the rules of surgical asepsis, the skin and subcutaneous tissues, down to and including the interspinous ligament, are infiltrated with a solution of novocaine. The initial wheal in the skin may be accomplished, in the majority of cases, without the knowledge of the patient, providing a small hypodermic needle with a sharp point is used. I prefer a 19 to 20 gauge needle with a short bevel for making the spinal puncture, which is usually through the fourth lumbar interspace. The larger needle is less liable to break and its introduction is as painless as the smaller one, providing the anesthesia is perfect and the cutting edge of the needle razor sharp.

There is no necessity of placing the patient in the upright position. Despite the enlarged uterus,

there is no obstruction to entering the canal if the patient is placed in the correct posture. Lying on the side, the thighs are flexed on the abdomen, the head is bent forward and the back bowed out. Care should be taken to see that the lower shoulder is directed downward in a vertical line with the hips, otherwise the spine will be twisted and occasion some difficulty with the easy introduction of the needle. As one develops his technique he will find that it is not necessary to lose more than three or four drops of spinal fluid during the whole procedure. This does away with the headaches which follow many spinal punctures, as the spinal fluid in which the novocaine crystals are dissolved, is immediately replaced.

The giving of a spinal anesthetic is a procedure to be carried out in a modern hospital where every provision is made for the aseptic details of the technique. Under no circumstances should one feel that its use in the home is justified. A delivery bed is as essential to the easy performance of this operation as a surgical table is in surgical cases.

In none of these cases has there been any unpleasant sequelae. Several patients vomited, but we have all seen this happen when spinal anesthesia was not used. It is a reflex condition caused by the great distention as the head passes through the os. This series had only 50 mg. of the drug, and in one case the dose was repeated. One patient has been delivered twice with this method.

The relief from pain is complete and lasts about an hour. While there is no diminution in the strength of uterine contractions the patient is unaware of their occurrence, except a few women state that they experience a sensation of "tightness" in the region of the uterus. It is necessary for some one to keep a hand upon the uterus so as to instruct the patient when to strain or "bear down." The relaxation of the soft parts obtained with this anesthesia aids in the more rapid delivery of the child, and is ideal for the application of forceps, because the mother is prepared to cooperate in all the endeavors of the doctor; owing to this and the continued uterine contractions, less traction with forceps is necessary. The blades may be removed when the head is well down on the perineum and its further delivery delayed at will. Lacerations are easily repaired without any further anesthetic, and fewer episiotomies are necessary. There is no delay in the delivery of the placenta, nor is there any tendency to postpartum hemorrhage.

The versions were not quite so satisfactory. The continued uterine contractions, added largely to the difficulties and dangers of the operation, and also extended the time necessary for its accomplishment. In these cases it would be better to further expand the dilation or make use of larger doses of the drug.

Its value as an anesthetic in Cesarean section seems ideal. The small amount of bleeding from all sources impressed me greatly. Even the separation and removal of the placenta did not occasion the usual amount of blood. The uterus contracted promptly and firmly and remained so. This patient being an eclamptic, the use of pituitrin, which is customarily injected into the uterine muscle, when operating under a general anesthetic, was contraindicated and not given. The dangers to the lungs and kidneys, present too often after the use of a general anesthetic, were entirely eliminated, and the toxic infant had no further danger added to its already uncertain life. Lastly, if it is necessary, intracranial pressure may be reduced by withdrawal of the spinal fluid at the time of puncture.

Just when to make the injection in the conduct of normal cases is a matter of judgment, derived from experience only, and no set rule can be laid down. It should, of course, be timed so its effect will not wear off just when we need it most.

The advantages of spinal anesthesia in the conduct of labor are many, several of which have already been referred to. Recently an experience in two cases illustrates an advantage which seems to be especially noteworthy; in one patient the fetal heart slowed down to 100 beats per minute, while in the other it got as low as 60. The danger to the infant from pressure seemed imminent, but the hastening of the labor under spinal anesthesia resulted in the birth of a live baby on both occasions. The time required in securing an anesthetic plus the disadvantages of a general anesthetic would, most likely, have resulted in the death of the infant in one, if not both cases.

In conclusion, I wish to reiterate that as my experience in the practice of this specialty grows, I am more and more convinced of the humanity of our endeavors to help those suffering women through a most trying ordeal, which culminates nine long months of pregnancy. I am equally convinced of the enormous advantage which such a practice has upon the future prompt recovery of the patient, and that such prompt recovery adds to the healthy progress of the infant.

THE BACTERIOLOGICAL DIAGNOSIS OF DIPHTHERIA

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The usual methods for the bacteriological diagnosis of diphtheria and the recognition of carriers of diphtheria bacilli as actually employed in most hospital laboratories of this country do not furnish the results one could expect from a bacteriological examination. Frequently, Hoffman bacilli or the corynebacterium cutis commune are taken for Klebs-Loeffler organisms. In many other cases, the laboratory fails to detect diphtheria carriers. A critical analysis of the methods now in use does not fail to reveal the sources of these shortcomings. A throat swab is smeared upon the surface of a Loeffler's blood serum slant. After eighteen to thirty hours, smears are taken from the growth and stained with Neisser's. Albert's or similar stains which put the so-called polar bodies in evidence. To this procedure, which nowadays represents the current routine of most laboratories, the following objections present themselves: (1) The first commandment of bacteriology, isolation, is not complied with. The cultures in the great majority of the cases do not permit the selection of single, suspicious, characteristic colonies for microscopic examination. Therefore, when there is not an abundant predominance of Klebs-Loeffler colonies, it is left to a mere chance whether the examiner finds with his loop what he is looking for. (2) The usually employed stains do not permit a certain differentiation between true diphtheria and pseudodiphtheria bacilli. In most cases, the examiner feels inclined to depend on the presence or absence of polar bodies. But we should bear in mind that pseudodiphtheria bacilli sometimes present polar bodies, while they are often lacking in true diphtheria. (3) While the Klebs-Loeffler organisms frequently develop considerable colonies in as short a time as ten hours, the colonies sometimes fail to appear before thirty-six hours. The diagnosis might be missed if the final examination is made at thirty hours.

We believe that the following procedure, as employed at the present time in the laboratories of the Jackson Memorial Hospital overcomes all of these shortcomings. It can be described as follows:

(A) Culture medium: Beef blood is procured from an abattoir. The serum is separated, distributed in test tubes up to about 3 centimeters height. It is then put in a slanting position (care

should be taken that the liquid does not reach the cotton plugs) in an incubator or inspissator and left there at a temperature not exceeding 64-65 C. until the serum has completely solidified. The tubes should then be sterilized by heating them up to 60 C. for one hour on two consecutive days. The resulting culture medium has the advantage to be transparent like Agar Agar which renders the recognition of colonies in transmitted light very convenient.

(B) Inoculation of culture tubes: A sterile swab is applied to the patient in the usual way. With this single swab three tubes should be inoculated, touching the entire surface of each slant without recharging the swab. This insures the development of isolated colonies in at least one of the tubes. The tubes are then placed in the incubator and the first examination is made after eighteen hours. No negative report should be issued before the lapse of forty-eight hours. The diphtheria colonies, if present, appear perfectly round with smooth borders, the center is distinctly opaque. Colonies of pseudodiphtheria bacilli are of a different character. Their appearance is shining, creamy; the borders are less regular; they have no opaque center; are paler and more transparent than the diphtheria colonies.

The first colonies generally are impure. If the virulence of a strain has to be studied or biological methods of identification are desired, it is necessary to purify the strain by diluting a fragment of a colony in a bouillon tube and making a new culture with isolated colonies on coagulated serum.

(C) Coloration and morphological aspect: The safest way of differentiation of the stained Klebs-Loeffler bacilli is a modified Gram stain with prolonged decolorization as follows:

Reagents. (1) Anilin water-gentian violet (Paltauf). About 2-3 c.c. anilin oil are added to 50 c.c. distilled water in a flask which is then vigorously shaken. After standing for a short while, the anilin water is filtered. To 40 c.c. of the filtrate, 4 c.c. of a saturated alcoholic solution of gentian violet is added. The stain should always be applied to the smear through a filter. It keeps for about a week, but its absolute dependability repays generously for the little trouble of preparing it. It is used exclusively in our laboratory for all Gram stains.

(2) Iodine solution (Nicolle).

Iodine 1 gram
Potassium iodide 2 grams
Distilled water 200 c.c.

(3) For decolorization we use, except for the

differential stain of diphtheria bacilli, the following solution (Nicolle):

Absolute alcohol 3 vol.
Acetone 1 vol.

This mixture acts within 8-10 seconds. In staining for diphtheria bacilli, we use only absolute alcohol for 10-15 minutes instead.

(4) Concentrated aqueous solution of safranin is used for counterstaining.

Procedure: Thin smears are fixed by heat in the usual way and stained for 1-5 minutes with the anilin water-gentian violet (No. 1). Without washing they are covered with the iodine solution (No. 2) which is renewed two or three times within 4 or 6 seconds. The preparation is then decolorized for 10-15 minutes in absolute alcohol, washed with distilled water and stained for a few seconds with the safranin (No. 4). By this method the otherwise grampositive diphtheria bacillus appears gram negative, while the pseudodiphtheria bacilli always resist the prolonged decolorization with alcohol and still appear blue. The diphtheria bacillus presents itself stained in red. The bacilli have rounded edges, are sometimes curved. They are inclined to form clumps in which they not only have the tendency to lay parallel but also touch and cross each other in oblique angles which is not the case with pseudodiphtheria bacilli. They never form chains. The polar bodies and other granular inclusions, if present, have more resistance against the alcohol and therefore still appear bluish. From a morphological point of view, three types of diphtheria bacilli can be distinguished:

- (1) The long forms, 5-7 mikrons long.
- (2) The intermediate of 3-4 mikron length.
- (3) The short ones of about 1-2 mikrons.

Most of the bacilli found in diphtheria belong to the two first groups. The longer ones are the more toxic. The short ones are rare in cases of diphtheritic angina but frequently encountered in cases of croup.

The pseudodiphtheria bacilli are usually short and thick. They appear blue if stained with the above mentioned method; they have the tendency to lay parallel but they do not overcross at oblique angles. The *Corynebacterium cutis commune* (Nicolle), as a rule, contains polar bodies.

DISCUSSION

The diphtheria bacilli are recognized by the following points: (1) The appearance of isolated colonies; (2) the morphological and staining properties.

SUMMARY

(1) Fallacies of widely employed "standard" methods for the detection and recognition of diphtheria bacilli have been discussed. (2) Procedures to overcome these shortcomings have been described.

DONORS OF BLOOD TRANSFUSION*

JOHN E. BOYD, M.D.,

and

GEORGE W. RICHARDSON, M.D.,

Jacksonville.

The transfusion of blood did not become a safe procedure from the standpoint of the patient until the medical profession learned about the compatibility of blood. Several deaths, as well as many severe reactions, occurred prior to this time. Experience has shown that there are also other things to be considered in the selection of donors.

The principal thing that concerns the patient is a careful examination of the donor's blood as to its compatibility or suitability for use in his or her case. Years ago, Landsteiner, taking the action of the serum of one person upon the corpuscles of another as a basis, worked out three different groups; several years later, Moss added to these a fourth one. If the donor's serum agglutinates the patient's corpuscles, the transfusion can proceed with impunity because the immediate dilution and diffusion in the recipient's blood does little, if any, damage to his corpuscles. If the donor's corpuscles, however, are agglutinated by the patient's serum, then the transfusion will result in an immediate clumping together of the transfused corpuscles. The result of this mass action of a large amount of agglutinating serum on a comparatively small amount of corpuscles produces a reaction in the patient similar to anaphylactic shock.

It is thought best by many to have the donor and the patient in the same group. A study of Moss' diagram, however, makes it appear that Group I patient may have a donor from any group because their serum cannot agglutinate the corpuscles from any donor. Group 4 persons (43 per cent of all) require donors from their own group, as their serum agglutinates the corpuscles of all other groups. However, a Group 4 donor can be used for any person, as his corpuscles are not agglutinated by any serum. Group 2 and Group 3 donors are absolutely incompatible with each other, so patients of these groups must

have donors of their own group or else of Group 4.

Physicians are sometimes warned against the use of "universal donors," but Brines states that his experience does not substantiate that advice. In any transfusion, so far as compatibility is concerned, the sole matter of interest is that the plasma of the recipient does not agglutinate the cells of the donor. The exceptions to this are negligible. With this in mind, then, Group 4 blood is the safest and most ideal to give because Group 4 cells are not clumped by any agglutins. This fact is especially valuable because of the promptness with which a Group 4 donor can usually be secured, and this may be the means of saving a patient's life. It has been shown that individuals remain in the same blood group throughout life, so that once a donor is properly typed there should be no apprehension about his group changing. Apparent exceptions have occurred but a careful investigation always revealed an error in the grouping.

In selecting donors the transmission of disease, especially syphilis, must always be remembered. While the recorded number of syphilitic infections through transfusion is small, the prevalence of the disease and the inadequate means of detecting it demand much wider recognition than is accorded it at present. The Wassermann test is not infallible as a diagnosis of syphilis. When either a professional or a volunteer donor, with a negative Wassermann only, is accepted for transfusion there immediately arises a grave responsibility. The possibility of lues cannot be conscientiously ruled out until a thorough examination has been made by a competent syphilologist in addition to a negative Wassermann.

There are still other matters of importance that arise in the selection of donors. Morgenthauer, Cochran and Davis, in "The Surgical Clinics of North America," state: "We are now using, when possible, non-professional donors. We think this is more agreeable to the patient and that better and healthier blood is thereby obtained for the transfusion." Sometimes it is more difficult to get into the veins of the non-professional but expertness largely overcomes this. There is an aluminum arm rest which keeps the elbow well extended and gives good vein exposure which is also a wonderful help in the overcoming of this handicap. A donor that furnishes a maximum, as well as a continuous flow of blood, is another very essential factor. Dr. George Richardson calls particular attention to what he terms "pump-

*First article in a series of three.

ing force," or the keeping up of a strong flow of blood. The application of just enough pressure to stop the venous return without affecting the arterial flow is needed to accomplish this and can be best learned by practice. There is a tourniquet made of ball chaining and two sliding pieces of metal, fastened by a spiral spring, which is extremely useful in transfusion work on account of the ease of changing the pressure on the arm by simply drawing up or letting out one ball at a time. Donors say that this tourniquet is much more comfortable than rubber tubing. It is well also to remember that male donors are more satisfactory, as a rule, than female ones both as to the size and accessibility of their veins, as well as their ability to furnish a continuous blood flow.

One of the most interesting recent developments in the matter of donors is the possibilities involved in the use of blood from immunized donors to treat certain types of infection. Probststein and Seelig, in the August, 1929, issue of "Surgery, Gynecology and Obstetrics," report a very interesting case of post-operative progressive gangrenous infection of the skin and subcutaneous tissue which was treated successfully by this means when all other known methods of treatment had failed. Repeated examinations of the wound had yielded the staphylococcus aureus in pure culture. A vaccine was made and injected, with increasing doses, into the husband and stepson every 10th day. Slight local reactions were noted after the tenth injection. With the husband and son alternating as donors, transfusions of 100 c.c. each were given to the patient at weekly intervals. During each transfusion the patient complained of a burning over the wound within 10 minutes after starting the flow of blood. No other reaction was noted until the fifth transfusion when there was a complaint of slight respiratory oppression during the operation. During the next, or sixth transfusion, the patient's breathing became distinctly labored so the operation was stopped when only 70 c.c. of blood had been given. Owing to this evidence of sensitization, the treatment was discontinued. Improvement in the wound became marked within two weeks after the first injection and was continuous from that time forward until the wound healed.

The inference to be drawn from this consideration of donors is that the results will depend largely upon the attitude of individual hospitals. A trained team, with high morale, good environment, and the proper professional support, exerts a powerful influence for the greatest success of

the treatment, and will also act as a stimulus to individual efforts toward improvement. The higher grade hospitals have already adopted this policy, while the average hospital is still satisfied with a list of donors to be furnished in the indiscriminate and generally slovenly use of a wonderful treatment.

THE USE OF RADIUM IN BENIGN UTERINE HEMORRHAGE*

GERARD RAAP, M.D.,

Miami.

Within the past month, it was my privilege to hear Dr. Howard Kelly reiterate his statement of 1922, which at that time was considered rather radical. "He who would give his patients the same consideration he would give his wife, or sister, must put radium first in the treatment of fibroid tumors. In uncomplicated fibroids, there is no treatment quite as satisfactory." The fact that the use of radium with proper forethought has practically no mortality incidence, that it checks bleeding temporarily or permanently in every case, and that it in no way interferes with or contraindicates later operation if necessary, make it the therapeutic procedure of choice in many cases of benign lesions of the female generative tract and certainly lead us to make the statement that its use must be given weighty consideration in the majority of pathologies so localized.

Pausing for a moment to enumerate some of the pathologies amenable to radium therapy, we find that most of these, at one stage or another, are accompanied by hemorrhage of greater or lesser degree, and they may, therefore, be considered relevant to the title of this paper.

1. Radium therapy and surgery are both available in cases of uterine fibroid. Certain contraindications have been defined to the use of radium, but the knowledge of its effect, among the laity, as well as closer attention on the part of the general practitioner to pelvic disorders have made the percentage of radium applicable cases by far preponderant. I believe it may safely be stated that every surgeon will call the radium therapist into consultation if his wife or sister shows evidence to suggest such a diagnosis, and we allow you to draw further deductions from this statement as you see fit.

2. Metrorrhagia and menorrhagia of undetermined cause, or due to ovarian dysfunction, vascular pathology, endocrine disturbance.

*Read before DeSoto-Hardee-Highlands County Medical Society, Arcadia, May 13, 1930.

3. Hemorrhage of climacteric.
4. Endocervicitis and cervicitis producing chronic leucorrhœal discharge, chronic metritis and endometritis.
5. In surgical cases when the cessation of bleeding is essential to the possibility of surgery.
6. Its use has been suggested in the pernicious bleeding during gestation. This will be discussed later as to its difference of opinion and dangers.

Uterine Fibroids.

In contrast to Roentgen therapy, radium acts chiefly on the tissues of the tumor and the uterus and as such permits of a more carefully controlled dosage to the pathology diagnosed. It is only a logical assumption that in those cases in which we know the site of pathology to be closely confined to the interior of the uterus, this should be the method of choice. Various considerations must be borne in mind and properly evaluated to attain a proper degree of satisfaction in its use. In women under thirty-five years of age, the degree to which ovarian function or reproduction is to be preserved must form the criterion as to the advisability of surgery and the dosage of radiation, if used. Occasionally, myomectomy with recurrence of the tumor necessitates the use of radium.

Although Kelly and others have stated that satisfactory results have been obtained in fibroids as large as a six months' pregnancy, yet we prefer to resort to surgery in those instances where the fibroid mass rises well above the umbilicus, unless, as in one of our cases, they present a recurrence of a previously myomectomized uterus. We do not hesitate to use radium, however, in those cases also when serious cardiac lesions or diminished renal function complicate the picture.

Although recent or remote active inflammatory disease is usually considered a definite contraindication, yet we know that we have treated three cases in which such a complicating factor was present, two of these being colored women. Their post-radiation course was definitely stormy, but the end-result satisfactory.

Interstitial types of tumors respond more readily than the subserous or polypoid types. When the pre-operative diagnosis of subserous tumor is definite, we prefer surgery, and in the polypoid type as well. It has been our experience, however, that pre-operative radium therapy offers a far better surgical risk. We have had four such cases. One instance in which a fibroid tumor did not respond indicated to us the value of previous

X-ray examination, for it proved to be distinctly calcified.

When uterine fibroids are of a markedly asymmetrical type or shape, we cannot expect such satisfactory results in those in which we may mechanically arrange uniform radiation.

Whenever definite organic ovarian pathology, as for example cysts, are recognized, we feel that surgical exploration is indicated.

Metrorrhagia and Menorrhagia.

Metrorrhagia and menorrhagia of adolescence, of the idiopathic type, due to ovarian dysfunction, chronic infection and vascular pathology, merit the conservatism of the well-armed internist or gynecologist. In very young cases, we prefer to use radium as a resort just precedent to that of radical surgery, and it has been our observation that consultation with the internist together with careful and thorough laboratory procedures usually obviate the necessity of cessation of ovarian function. There appears in our files, therefore, but one instance in a girl of 14 years in whom we were unsuccessful, first with small dosage, later with heavy dosage, and hysterectomy was later resorted to to stop the intractable bleeding.

Hemorrhage of Climacteric.

For the hemorrhage of climacteric, radium therapy is the boon par excellence. To see these patients come into the office, anemic, mentally disturbed, already positive of the presence of carcinoma, even more apprehensive because they have been informed of the necessity of radium therapy, which *must* mean malignancy, and to see these same women after a few weeks restored to their normal color, and later rid of that periodic or constant annoyance is, indeed, most gratifying. That this can be done with little pain, no primary mortality, a short period of treatment and disability, without the 3% ultimate mortality of surgery, without the possibility of thrombo-phlebitis, or pulmonary embolism makes it still more desirable.

Pernicious Bleeding of Gestation.

I mentioned the use of radiation in the pernicious bleeding of gestation. Dr. Hoffman of Pensacola has shown by a few of his own cases that radiation of the spleen produces remarkable results in the amelioration of bleeding from mucous membranes, and others have shown similar distinctly hemostatic effects. Although the question of the effect of radiation on pregnancy and on the second and third generations is still being debated, we find that those who have become old and gray-haired in this specialty do not agree with the vagaries of statistical data, and we are inclined

to feel that the advances of proper dosage as well as proper selection of cases will show further possibilities in this field.

Purposely, we do not discuss the procedure of radium application in a meeting of this type. Suffice it to say that the method of preparation is identical to that of curettage, the technic must be equally aseptic, and a curettage for diagnostic purpose should be done to rule out the possibility of malignancy. All patients are informed that their chief complaint during the administration will be possible nausea due to the presence of a foreign body in the uterus and the packing in the vagina. If this latter item is not carefully and thoroughly done, in order to remove the apposing bladder wall and rectum as far as possible, radium ulcers have been known to occur, but this can be avoided by average care on the part of the physician, and a reasonable degree of cooperation on the part of the patient, and above all an observant nurse.

It has been our experience that some of these patients become a bit uncomfortable during the ensuing climacteric by virtue of the rapid course through which this climacteric progresses. Hot flashes, depression, and headaches may complicate its course. We are using ovarian extracts of the commercial variety to counteract this in so far as possible. The result obtained with the administration of Estrogen, a standardized product, biologically assayed, promises that our efforts in balancing this complicating factor, will be far more effective than heretofore.

It is extremely rare for malignancy to develop in these cases after careful diagnostic curettage, accurate radium dosage according to the pathology found, and frequent follow-up examinations. Insofar as we treat the pre-cancerous stages, we can expect to make inroads on the ravages of malignancy.

PULMONARY TUBERCULOSIS*

C. H. FERGUSON, M. D.
Thomasville, Ga.

Tuberculosis is a disease which engages the attention of every branch of medicine. It is widespread; there hardly exists a family in which some instance of its ravages has not occurred. Being infective in origin, theoretically it should be capable of extinction. Tuberculosis is vital to every individual from an economic and social

standpoint and its control would be a great saving in wealth to the community.

It is, for the most part, a chronic disease. The onset may be so insidious that the disease becomes well established before its symptoms are recognized; frequently, it has a firm hold upon the patient before the physician is consulted.

We need a well directed campaign of education for the general public to awaken an interest and to teach the symptoms of the disease in its incipency. I do not know of a more vital subject for the reform worker to expend his energies upon than in intelligent propaganda in the first signs and symptoms of tuberculosis, the methods by which the disease spreads and the effective method of control. Every individual should have a knowledge of the many ways that tuberculosis manifests itself so that medical care will be sought early, as treatment in the beginning of this disease is the only hope of cure.

The bacillus tuberculosis is ubiquitous in all civilized communities; it is generally agreed that most of us have been infected. Assuming that the great majority of infections take place in childhood, the most important prophylactic step, until a specific prevention or a cure is found, is the removal of the active cases from houses where there are children. The length of time contact with sputum positive for tubercle bacilli, is an important factor in the spread of the disease in the family. Therefore, the value of early diagnosis is not only the prevention of the spread of the disease but also of value in the treatment of the individual case. I think it has been the experience of most physicians that when the tubercle bacilli are found freely in the sputum the result of treatment is bad, regardless of the kind of treatment employed.

Tuberculosis may be hereditary or congenital. There are well authenticated cases where the tubercle bacillus has been found in the fetus at necropsy, also in the placenta. There is no good reason to believe that placental tissue is an effective barrier against the tubercle bacilli. I believe that in all pregnant women with active tuberculosis there is a possibility of infecting the fetus in utero, so that physicians doing obstetrical work should keep in mind this probability.

Hilum tuberculosis is the term used to designate the juvenile type of the disease. Following a first infection, a primary nodule develops in some part of the parenchyma of the lung and the tracheo-bronchial lymph nodes draining that area

*Read before the Leon-Gadsden-Liberty-Wakulla-Jefferson County Medical Society, Quincy, April 10, 1930.

of the lung become infected and diseased. Diagnosis is made by considering the following facts:

First the history: evidence of contact with an open case of pulmonary tuberculosis; four times as many cases of pulmonary tuberculosis are found among the contact children as are found among the children without the history of such exposure. The symptoms are undue fatigue, lassitude, anorexia and nervous irritability, and underweight. Cough and fever so often present in pulmonary tuberculosis of the adult type, are rare in the juvenile type.

A roentgenogram is a most valuable aid in the study of these children; without it an absolute diagnosis of hilum tuberculosis cannot be made. A physician is not justified in eliminating tuberculosis as a possible cause of ill health unless the roentgenogram is found to be negative.

The tuberculin test: a positive Von Pirquet or intradermal tuberculin test is essential to make certainty of infection. In children from five to fifteen years of age, a positive reaction may not indicate active disease, but it does mean that the child is harboring tubercle bacilli. The question of activity must be determined by symptoms and the general physical condition of the patient.

The adult type of pulmonary tuberculosis is not as difficult to diagnose as the juvenile type. The physician to whom a patient goes full of confidence should not pronounce the verdict tuberculosis with all its consequences to the family life, professional, and social career, without the most painstaking examination, and the use of every method to definitely establish the diagnosis. The psychic influence and the result of contact with others actually tubercular are too grave to be lightly considered to condemn an individual on suspicion.

I am giving a concise and careful summary of the minimum findings that would warrant a definite diagnosis of tuberculosis. This standard is set by Lawrason Brown of Saranac Lake; if he erred it is on the side of boldness.

His diagnostic criteria are:

(1) hemoptysis of a drachm or more; (2) pleurisy with effusion; (3) moderately coarse rales above the third rib and the third vertebral spine; (4) a parenchymatous Roentgen ray lesion in the same area; and (5) tubercle bacilli in the sputum. He claims that careful attention to these points will enable a correct diagnosis to be made in about 98 per cent of all doubtful cases. Taking Dr. Brown's criteria seriatim:

(1) It will be noted that for significant hemoptysis Dr. Brown postulates an amount of blood of not less than a teaspoonful. He thus excludes those cases of "colored" or "streaky" spit which, except in cases of chronic fibroid phthisis, are usually due to causes other than tubercle. We might add that a hemoptysis which the patient delights to describe is seldom tuberculous in origin, while one which he strives to minimize or attribute to epistaxis is almost invariably of sinister import.

(2) Pleurisy with effusion should obviously be treated as tuberculous unless some other cause is manifest, while dry pleurisy should at least be regarded as a danger signal.

(3) The significance of rales is usually appreciated, but the old and incorrect teaching that tubercle usually commences in the lung apex may lead to error. The signs of the graver types of phthisis, especially in the young, are usually found below the clavicle. The true apex of the lung is more often the site of abortive disease. A careful examination of the axillary regions may reveal crepitations when the upper half of the lung, both anteriorly and posteriorly, is apparently free. The necessity of auscultation over the lateral walls of the chest is too frequently forgotten.

(4) The importance of repeated examinations of the sputum for tubercle bacilli cannot be exaggerated; to neglect this measure is responsible for more errors in diagnosis than all other causes combined. If five examinations at weekly intervals yield a negative result, the practitioner may regard the future of his patient with some degree of equanimity. There are exceptions to every rule, and all the circumstances of the case must be taken into account; the records of any dispensary will show that, provided a conscientious search for tubercle bacilli has failed to discover the bacillus in the first instance, only in rare cases will a positive finding be forthcoming at a later date. Especially where young adults are concerned, experience does not support the statement frequently made that the "T. B. minus" case, failing sanatorium treatment, will later develop into a "T. B. plus" case.

(5) X-rays are invaluable in the differential diagnosis of chest disease, but a poor skiagram is worse than useless. Unless, therefore, a first-class apparatus and skilled interpreter are available, the general practitioner will be compelled to rely on the symptoms, physical signs, and bacteriological tests. A history of exposure to infection ob-

viously indicates the need for special care, but whenever possible a radiographic examination of the chest should be made, for, as Dr. Brown rightly insists, it is only in the absence of each of the five criteria that pulmonary tuberculosis can be excluded with confidence.

I would like to add to Dr. Brown's standard the following observations: a pulse rate which is persistently high. It may be accompanied by a slight rise in temperature in the afternoon to 99° probably or it may be afebrile. This symptom without evident clinical cause is a suspicious sign if not a direct one of incipient tuberculosis. I think it wise to keep this fact in mind when reviewing the signs and symptoms of tuberculosis. Treatment: fresh air, diet and rest are the physical part of treatment. In the case of children, the treatment is prescribed and the orders are executed by the nurse or parent of the child. In the adult, the treatment presents a very different aspect. The physician has to deal with the patient's temperament, his attitude toward himself and the disease which he has contracted; therefore, treatment is not the simple matter of ordering things done. There are two factors as stated by Minor, whose experience in the treatment of tuberculosis warrants this reference. The constitutional resisting power of the patient which cannot be measured but which the physician of experience and judgment can fairly estimate, and the moral resisting power which the wise physician well knows how to develop, if it is lacking, are the important factors. Let the physician keep this ever alive before his mind, for as long as he has faith in the possibility of a cure he can give fighting power to his patient, if the patient is half a man and by such psychotherapy he can accomplish miracles. It is in the power of any physician who takes a live interest in his patient and knows how to unlock the secrets of his heart, to bring to him aid in his fight, such as rest, surgery or climate alone cannot give. Fill the patient's heart with hope and the fighting force of every cell of

his body is doubled. Create an unconquerable spirit that will rouse his will to fight and the task at once becomes easier. Light, artificial, and sunlight carefully used are also factors in the treatment. The amount of food the patient takes is a very important point also in his recovery. It seems by experience that the optimum balanced diet calculated by the caloric requirements of the patient is divided somewhat in the following way: protein from 60 to 90 grams per day and fats and carbohydrates to make up the usual requirements of 2500 calories.

The bacillus Calmette-Guerin vaccine or the B.C.G. vaccine consists of attenuated living bovine tubercle bacilli. Calmette fed the vaccine during the first ten days of life to infants, claiming that it was readily absorbed and a relative immunity was established. The death rate from tuberculosis, it has been claimed, has diminished from 25 per cent in non-vaccinated children to 1 per cent in the vaccinated. The B.C.G. vaccine has been given in 0.01 milligram doses subcutaneously in adults.

No specific therapeutic agent has been found for tuberculosis. Investigation as to the value of chaulmoogra oil in tuberculosis was carried on because of its action on the bacillus of leprosy, which is another acid-fast microorganism, but was found valueless.

The National Tuberculosis Association is conducting research work along social and medical lines. The chemistry of the tubercle bacillus and the filtrates and the study of the biological properties are under investigation. The manifestations of tuberculosis are the manifestations of living chemistry of the tubercle bacillus with the living chemistry of the body cells. To understand the chemistry of the tubercle bacilli is to know the protein substances, fat fraction and carbohydrates. Study in this direction may result in the discovery of a specific therapeutic agent for tuberculosis which will be the highest achievement in medicine.

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SEVENTEENTH DISTRICT—SPENCER A. FOLSOM, M.D. Orlando
Osceola, Orange.
EIGHTEENTH DISTRICT—H. GATES, M.D. Bradenton
Manatee, Sarasota.
NINETEENTH DISTRICT—HENRY P. BEVIS, M.D. Arcadia
DeSoto, Hardee, Highlands.
TWENTIETH DISTRICT—WILLIAM R. WARREN, M.D. Key West
Monroe.
TWENTY-FIRST DISTRICT—H. D. CLARK, M.D. Ft. Pierce
St. Lucie, Okeechobee, Indian River, Martin.

PRESIDENT'S SPECIAL APPOINTMENTS

REPRESENTATIVE, FLORIDA HEALTH COUNCIL

H. MASON SMITH, M.D. Tampa

ADVISORY COMMITTEE TO WOMAN'S AUXILIARY

FREDERICK J. WAAS, M.D. Jacksonville

J. H. PIERPONT, M.D. Pensacola

J. E. TAYLOR, M.D. DeLand

J. S. McEWAN, M.D. Orlando

W. W. MASSEY, M.D. Quincy

THE SURGEON'S RESPONSIBILITY IN POST-OPERATIVE COLLAPSE OF THE LUNG

A very common post-operative complication and yet one that oftentimes is not recognized is collapse of the lung. This condition is now recognized as a distinct clinical entity, a very important and at times a serious complication that may terminate fatally if not recognized and proper treatment instituted. Every surgeon will at some time be called upon to deal with this condition and it is well that he familiarize himself as thoroughly as possible with it and be able to recognize it.

Several important observations have been made recently and the role that respiration plays is probably foremost. Shallow breathing predisposes to bronchial obstruction and collapse, whereas deep breathing does not. Carbon dioxide is nature's stimulating agent in the latter. The cause appears to be post-operative embarrassment of respiration accompanied by mucus obstruction

somewhere in the bronchial tree. The predisposing causes are speculative but shallow breathing as the actual cause is known as a definite factor.

The usual symptoms seen may develop from a few hours after the operation to twenty-four, forty-eight or even seventy-two hours later, usually in the first twenty-four. Rapid pulse resembling hemorrhage is seen, acceleration of the respiratory rate, cough and chest pain with early distress may be absent. Cyanosis, moderate at first, is practically always seen accompanied with increased respiration later and limited expansion of the affected side, usually the right. Cardiac distress and displacement follow. Confirmation of the diagnosis with the aid of the internist and radiologist employing both fluoroscopic and X-ray film procedures is sometimes necessary as well as essential in order that proper treatment may be instituted.

Prophylaxis should be the first consideration in treatment. Avoid all factors that predispose to bronchial obstruction by mucus secretion, as shallow breathing; make a change in position as soon as possible after operation; encourage deep breathing; do not constrict the upper abdomen or diaphragm by tight dressings. Continuance of prolonged Trendelenberg position is a factor, destroying the cough reflex is unwarranted and dangerous. If removal of the above causes does not relieve the patient immediate bronchoscopic examination and drainage will in almost all cases save the situation.

STATE NEWS ITEMS

A State Public Health Association was formed at a three-day meeting called at Jacksonville by the State Health Officer, Dr. Henry Hanson. A Constitution was framed with a view toward affiliating with the American Public Health Association at the earliest possible opportunity. The official registration totaled 150 while the attendance was well over 200. The following program speaks for itself as to the scope of the questions discussed and plans formulated for activities along the lines of preventive medicine:

MONDAY, DECEMBER 8TH

Henry Hanson, M.D., presiding.

- 9:30 a.m. Invocation—Dr. L. M. Bristol, Gainesville.
 9:35 a.m. "Purpose and Ideals of the State Board of Health"—H. Mason Smith, M.D., President State Board of Health.

- 9:50 a.m. "State Health Program"—Henry Hanson, M.D., State Health Officer.
 10:15 a.m. "Cooperation of Outside Agencies"—John Ferrell, M.D., International Health Board, New York, N. Y.
 10:40 a.m. "Importance of Unified State Program"—W. F. Draper, M.D., Asst. Surgeon General, U. S. P. H. S., Washington, D. C.
 11:05 a.m. "Importance of Local Health Organizations"—Mark M. Boyd, M.D., Rockefeller Foundation.
 11:30 a.m. "Health, the Fundamental of Education"—Dr. L. M. Bristol, representing the University of Florida, Gainesville.
 12:10 p.m. "Ideals of Public Health Nursing"—Miss Annabelle Peterson, American Red Cross, Washington, D.C.
 12:30 p.m. Luncheons—Round Table.
 Medical Officers.
 Public Health Nurses.
 Sanitary Engineering Service.
 Registration and Statistics.
 Public Health Laboratories.
 2:00 p.m. Henry Hanson, M.D., presiding.
 Unveiling of photograph of the late Dr. Joseph Y. Porter—J. N. Fogarty, M.D., Daytona Beach.
 Response—H. Mason Smith, M.D., Tampa.
 Bureau Directors give brief outline of program for the coming year, with high points of same. Fifteen minutes for speakers' program and fifteen minutes for questions.
 2:30 p.m. F. A. Brink, M.D., Bureau of Communicable Diseases.
 3:00 p.m. Paul Eaton, M.D., Bureau of Diagnostic Laboratories.
 3:30 p.m. Lucile Spire Blachly, M.D., Bureau of Child Hygiene and Public Health Nursing.
 4:00 p.m. Ellsworth L. Filby, C. E., Bureau of Engineering.
 4:30 p.m. Mr. E. C. Stoy, Cooperation.
 5:00 p.m. Adjournment.
 8:30 p.m. Reception and dancing.

TUESDAY, DECEMBER 9TH

- 9:30 a.m. F. A. Brink, M.D., presiding.
 General Field Problems of District Medical Officers.
 10:25 a.m. Crippled Children's Program—F. L. Fort, M.D., Jacksonville.

- 10:40 a.m. Lucile Spire Blachly, M.D., presiding.
General Field Problems of District Nurses.
- 12:10 a.m. Announcements.
- 12:30 p.m. Luncheon.
- 2:00 p.m. E. L. Filby, C. E., presiding.
General Problems of District Sanitary Officers.
- 3:30 p.m. Paul Eaton, M.D., presiding.
General Problems in Laboratory Technique.
- 4:15 p.m. T. H. D. Griffiths, M.D., Surgeon U. S. P. H. S., Malaria Investigations. Importance of Malaria Control.
- 5:00 p.m. Adjournment.
- 7:00 p.m. Banquet.
Toastmaster—H. Mason Smith, M.D.
Guest Speakers:
Ralph N. Greene, M.D., Past State Health Officer.
H. Marshall Taylor, M.D., Retiring President, Duval County Medical Society.
Luther Holloway, M.D., President, Duval County Medical Society.
Honorable Robert A. Gray, Secretary of State.
W. F. Draper, M.D., Assistant Surgeon-General, U. S. Public Health Service.

WEDNESDAY, DECEMBER 10TH

- 9:30 a.m. Meeting of State, Municipal and County Health Officers, County Nurses, and representatives of interested organizations.
Stewart G. Thompson, D.P.H., Director, Bureau of Vital Statistics.
George N. MacDonell, M.D., City Health Officer, Miami.
Noble A. Upchurch, M.D., City Health Officer, Jacksonville.
Inez M. Nelson, R.N., County School Health Supervisor, Orlando.
- 11:30 a.m. Organization and adoption of Constitution and By-Laws.
NEW OFFICERS ELECTED
Henry Hanson, M.D., President, Jacksonville.
George N. MacDonell, M.D., First Vice-President, Miami.
Noble A. Upchurch, M.D., Second Vice-President, Jacksonville.

Stewart Thompson, D.P.H., Secretary-Treasurer, Jacksonville.
Announcement—Dairy Conference.
Adjournment.

* * *

Dr. W. C. Chowning of New Smyrna spent three months last summer in rectal and venereal disease work at the University Hospital, Baltimore.

* * *

The Orange County Medical Society held its regular monthly meeting at the Orange General Hospital, Orlando, November 19th at 8:30 p. m. Dr. T. M. Rivers of Kissimmee read a paper on "Arthritis with Special Reference to Cause." Dr. Shaler Richardson, secretary-treasurer of the Association, and Dr. Stewart Thompson, business manager, were present as guests of the Society. They discussed plans for the coming state meeting which is to be held in Orlando in May.

* * *

The Pinellas County Medical Society held its regular meeting Friday evening, November 7th, at St. Petersburg. Dr. Wynan W. Harden and Dr. Earl C. MacCordy read papers. The meeting was extremely interesting.

* * *

Dr. Frank D. Gray of Orlando recently moved to offices 311 and 312 Exchange Building.

* * *

Dr. Frank J. Costa of Tampa now has offices in the Centro Asturiano Hospital.

* * *

Dr. Kenneth Phillips of Miami recently returned from Chicago where he was doing some post-graduate work.

* * *

Dr. John R. Rose of Titusville moved recently to Unadilla, Georgia.

* * *

Dr. W. B. Clark of Ocala recently returned from a business trip to New Orleans.

* * *

Dr. W. Joseph Vinson of Miami announces his removal to 400 Ingraham Building. Dr. Vinson was formerly located at 120 Shoreland Arcade.

* * *

The Brevard County Medical Society met at Melbourne October 2nd. Special entertainment features were arranged through Dr. T. C. Kenaston.

* * *

Dr. Robert P. Henderson of Tampa now has offices located in the Citizens Bank Building, Room 803.

Dr. and Mrs. B. Y. Pennington of Lake Wales announce the birth of a son, James Lewis Pennington, weight 10 pounds.

* * *

Dr. J. William Jones of Ft. Myers spent the month of October in Atlanta, taking clinical work at Grady Hospital.

* * *

Mrs. M. H. DePass, wife of Dr. M. H. DePass of Gainesville, died October 22, 1930.

* * *

Dr. E. S. Couric of Miami spent the month of September in New York taking post-graduate work.

* * *

Dr. and Mrs. L. C. Ingram of Orlando motored to St. Petersburg Armistice Day, where Dr. Ingram attended the Florida state meeting of the examiners for the aeronautic branch of the U. S. Department of Commerce.

* * *

Dr. Henry Hanson, state health officer, and Dr. Lucile Spire Blachly, director of the Bureau of Child Hygiene of the State Board of Health, recently attended the White House Conference on Child Welfare in Washington, D. C.

* * *

Dr. Beverly R. Tucker and his daughter, Elsie, of Richmond, Virginia, were the guests of Dr. and Mrs. H. Mason Smith of Tampa from the 10th to the 14th of December. Dr. and Miss Tucker had been in attendance at the meeting of the Seaboard Airline Railway Surgeons in Havana, Cuba, prior to their visit.

* * *

Dr. and Mrs. Noble A. Upchurch of Jacksonville announce the marriage of their daughter, Susanne, to Mr. Stevens Luke of Thomasville, Georgia, on November 11th.

* * *

Dr. and Mrs. Meredith Mallory of Orlando have returned from a two weeks' visit in New York.

* * *

Dr. Henry Fuller of Mulberry and Miss Edith Record of Hanover, N. H., were married recently. Dr. Fuller is a graduate of Harvard with internship at Massachusetts General Hospital and Memphis General Hospital. He is now associated with Dr. C. C. Pearce of Mulberry.

* * *

Dr. A. L. Mills of St. Petersburg returned recently from a two months' trip in the North. Dr. Mills spent considerable time taking post-graduate work in Philadelphia.

The marriage is announced of Dr. D. Ward White of Miami Beach to Miss Agnes L. Lamb of Miami Beach on August 9, 1930. Mrs. White was formerly a special music teacher in the Miami Beach Public Schools for four years. Dr. White is a surgeon with an office at 337 Lincoln Road. They are living in their new home at 2371 North Bay Road, Miami Beach.

* * *

Dr. M. B. Herlong of Jacksonville returned recently from quite an extended deer hunt and fishing trip along the Aucilla River in Taylor County.

* * *

Dr. H. E. Palmer of Tallahassee was recently chosen to serve as president of the Tallahassee Kiwanis Club for the ensuing year. Dr. Palmer is also a member of the State Board of Health.

* * *

Dr. I. F. Bean of Melbourne was a visitor in Jacksonville recently.

* * *

Dr. Frank Gray of Orlando attended the Georgia-Florida football game in Savannah.

* * *

Dr. and Mrs. Max Ghertler of Miami have returned from a trip abroad. They visited France, Switzerland and Germany while away.

* * *

Your wife will be interested in the Woman's Auxiliary page. Be sure to call her attention to page 284 of this issue.

* * *

The Florida Association of Aviation Medical Examiners invites applications for associate membership from physicians interested in aviation and aviation medicine. The association meets annually with the State Medical Society. No dues may be assessed associate members. Address: Dr. J. H. Cooper, Secretary, 216 Florida National Bank Building, St. Petersburg, Florida.

* * *

Dr. Ernest B. Milam of Jacksonville recently delivered an address before the Business and Professional Woman's Club at the George Washington Hotel, Jacksonville. Dr. Milam's subject was "The Health of the Business Woman."

* * *

Dr. and Mrs. H. Mason Smith of Tampa spent Thanksgiving with their sister, Mrs. Henry Lane of Jacksonville.

* * *

Dr. W. D. Anderson of Largo recently returned from Boston where he spent considerable time visiting clinics.

Dr. J. N. McLane is now located in Pensacola having recently moved from Hot Springs, Arkansas; practice limited to eye, ear, nose and throat.

* * *

Dr. and Mrs. Louis Orr of Orlando attended the Alabama-Florida game in Gainesville.

* * *

The State Board of Medical Examiners conducted an examination before the largest class in several years at the Seminole Hotel in Jacksonville recently.

* * *

Dr. Nelson M. Black has returned to 703 Huntington Building, Miami. Dr. Black was formerly in Milwaukee, Wisconsin.

* * *

Dr. and Mrs. Shaler Richardson and Dr. and Mrs. Stewart Thompson of Jacksonville motored to Orlando to attend the November meeting of the Orange County Medical Society.

* * *

Dr. Edward Jelks of Jacksonville read a paper before the Jacksonville Historical Society recently on the subject, "Dr. John Gorrie."

* * *

Dr. Harry Dash Johnson announces his return to Daytona Beach to continue his practice there. Dr. Johnson worked during the summer at Mount Washington in New Hampshire. A news item recently indicated that Dr. Johnson was formerly located at Orlando. This was an error as he practiced at Daytona Beach before going to New Hampshire.

* * *

Dr. W. H. Watters has just returned to his winter home in Florida. His address is now Boston-Miami Clinic, Coconut Grove.

* * *

The resignation of Dr. T. S. Field of Jacksonville from the medical staff of the Duval County Hospital as an associate in the department of obstetrics and gynecology was accepted recently and he was appointed as a consultant in the department. Dr. James M. Bryant will succeed Dr. Field as associate. The resignation of Dr. Stanley Erwin as clinician in the department of medicine was accepted by the board. His successor has not yet been named.

* * *

The semi-monthly meeting of the Pinellas County Medical Society took place November 21 at the Country Club House in Clearwater at 8 p. m. Dr. H. O. Brown of Clearwater exhibited X-ray films of a disease not frequently seen. A paper on "Undulant Fever" was read by Dr. F.

E. Kauffman of Clearwater and a paper on "Bronchospirochetosis" was read by Dr. J. A. Mease of Dunedin. The meeting was well attended.

* * *

Dr. George E. Miller of St. Petersburg recently moved his office to the Equitable Building.

* * *

Dr. Louie Limbaugh of Jacksonville returned recently from a trip in the North where he visited several medical clinics, including Boston.

* * *

Dr. and Mrs. Charles D. Cleghorn of Miami announce the marriage of their daughter, Miss Fannette, to Mr. Robert Lester.

* * *

Dr. W. P. Dey, naval officer stationed at Pensacola, was recently awarded the Nicaraguan medal of honor. He served two years in Nicaragua during the revolution there two years ago. Prior to entering the navy, Dr. Dey practiced in Jacksonville.

* * *

Dr. Hermon C. Bumpus of the Mayo Clinic, Rochester, was guest of honor at the December meeting of the Medical Study Club of Orlando. His subject was "Focal Infection with Reference to Urinary Tract."

* * *

Applications for medical officer, associate medical officer, and assistant medical officer will be rated as received by the U. S. Civil Service Commission at Washington, D. C., until December 30, 1930.

These examinations are to fill vacancies in the Departmental Service, Veterans' Bureau, Public Health Service, Indian Service, Coast and Geodetic Survey, and Panama Canal Service.

Competitors will not be required to report for examination at any place, but will be rated on their education, training, and experience.

Applicants must have been graduated with a degree of M.D. from a medical school of recognized standing. The requirements of additional education and experience vary according to the grade.

Full information may be obtained from the United States Civil Service Commission, Washington, D. C., or from the Secretary of the United States Civil Service Board of Examiners at the post office or customhouse in any city.

* * *

The Florida Dermatological Association held its regular quarterly meeting in Miami, December 20th.

L. HULL PIERCE

Dr. L. Hull Pierce, late of St. Petersburg, died in that city on November 5, 1930, of angina pectoris. He was born on March 15, 1861, at Owasso, Michigan, and graduated in medicine in 1888 at Starling Medical College. He early began to confine his work to the eye, ear, nose and throat, which specialty he continued to practice up to within a few days of his death.

He was very active in fraternal orders, being a life member of Egypt Temple Shriners of Tampa; a member of all associate Masonic bodies, and a talented musician, prominent in the Egypt Temple Band of eighty Shriners. He was captain in the U. S. Medical Corps, and was stationed at Camp Sevier during the war.

Dr. Pierce married Mrs. Mary Balch Forbes twenty-six years ago. He leaves his widow and a stepson, Dr. E. B. Forbes, also a prominent specialist in the same field, now practicing in Tampa.

The National Committee for Mental Hygiene announces the availability to properly qualified candidates of fellowships for training in extramural psychiatry.

Minimum Requirements for Applicants.

These fellowships are designed to provide special training for physicians who have had previous hospital training in psychiatry but who wish to prepare themselves for extramural work in the fields of child guidance, delinquency, education, dependency, and industry.

Fellowships are open to physicians who are:

1. Under thirty-five years of age.
2. Graduates of Class A medical schools, and
3. Who have had at least one year of training in a hospital for mental disease maintaining satisfactory standards of clinical work and instruction. A longer period of hospital training is desirable.

Applicants able to meet these requirements will not be required to take competitive written or oral examinations. Selections will be made on the basis of length and type of previous training in formal psychiatry; on general fitness for the work contemplated; and (in most cases) on the results of a personal interview.

Applications or inquiries for further information should be sent to Dr. Frankwood E. Williams, Medical Director, National Committee for Mental Hygiene, 370 Seventh Avenue, New York, N. Y.

The medical and dental societies of Manatee and Sarasota Counties held a joint meeting recently. The scientific program consisted of a symposium on focal infections.

* * *

Dr. and Mrs. Robert M. Harris of Miami have just returned from a six weeks' vacation spent in the mountains of North Carolina.

* * *

Dr. T. H. Wallis of Ocala spent several weeks in New York City recently taking post-graduate instruction in surgery at the Polyclinic Hospital.

* * *

Dr. A. W. Knox of Sanford just returned from Carlisle Barracks, Pa., after a six weeks' course at Medical Field Service School. Captain Knox was awarded the McCamant Medal given each year to the honor student in military hygiene and sanitation.

* * *

Dr. Gideon Timberlake recently returned to St. Petersburg after having spent the summer at his Atlantic City office and in Baltimore, Philadelphia and New York clinics.

* * *

Members of the Florida Medical Association who were registered at the twenty-fourth annual meeting of the Southern Medical Association held in Louisville, Kentucky, in November, were as follows:

Andrews, C. A.	Tampa
Andrews, L. L.	Orlando
Coplan, Milton M.	Miami
Davis, J. C., Jr.	Quincy
Dickinson, J. C.	Tampa
Driskell, S. E.	Jacksonville
Eaton, Paul	Jacksonville
Flipse, M. Jay	Miami
Ford, Edward W.	Crescent City
Freeman, A. H.	Ocala
French, Elmo D.	Miami
Hall, Thos. B.	Miami Beach
Herpel, Frederick K.	West Palm Beach
Holloway, Luther W.	Jacksonville
Jelks, Edward	Jacksonville
Kirby-Smith, J. L.	Jacksonville
McKibben, W. W.	Miami
Martin, Douglas D.	Tampa
Netto, Lloyd Jos.	West Palm Beach
Nobles, Robert G.	Pensacola
Norris, S. R.	Jacksonville
Royce, Clayton E.	Jacksonville
Sellers, E. T.	Jacksonville
Skaggs, P. T.	Miami
Snyder, J. W.	Miami
Turberville, J. S.	Century
Webb, E. Porter	Crestview

* * *

Dr. Clarence D. Rollins of Jacksonville returned recently from an extended trip in the North attending the Congress of the American College of Surgeons in Philadelphia and hospital clinics in Baltimore.

THE WOMAN'S AUXILIARY PAGE

WOMAN'S AUXILIARY TO THE FLORIDA MEDICAL ASSOCIATION, INC.

State Editor

MRS. EDWARD JELKS,
2244 St. Johns Avenue
Jacksonville

OFFICERS

Mrs. J. RALSTON WELLS, President	<i>Daytona Beach</i>
Mrs. S. E. DRISKELL, President-elect	<i>Jacksonville</i>
Mrs. W. G. POST, JR., Vice-President	<i>St. Petersburg</i>
Mrs. J. M. IRWIN, Historian	<i>St. Augustine</i>
Mrs. J. E. TAYLOR, Secy.-Treas.	<i>DeLand</i>

At the meeting of the Woman's Auxiliary to the Southern Medical Association, held in Louisville, Kentucky, Nov. 11-14, 1930, the Woman's Auxiliary to the Florida Medical Association had present two representatives, Mrs. S. E. Driskell, President-elect (who represented Mrs. Wells and gave her splendid report), and Mrs. Edward Jelks, both of Jacksonville.

At this early date, it is impossible to give a complete report of the meeting; however, a few impressions of some of its "high lights" may prove of interest. The General Session was held on the roof garden of the Brown Hotel, with the President, Mrs. James Newton Brawner of Atlanta, in the chair. The absence of Mrs. Arthur L. Walters, of Miami Beach, who was First Vice-President, was noted with regret by the Florida delegation.

Among the honor guests were Mrs. J. Newton Hunsberger, of Norristown, Pa., President of the Woman's Auxiliary to A. M. A. (who told of the objects and aims of Medical Auxiliaries and urged-organization), and Mrs. Walter J. Freeman, of Philadelphia, former president of the Pennsylvania Auxiliary, and now a member of the National Press and Publicity Committee. Mrs. Freeman announced that the National Auxiliary had been given space in the "Journal of the A. M. A." and also in the "Bulletin"; she urged all members to look for and read these notes. Other honor guests, who gave interesting and inspiring talks were Dr. Hugh S. Cumming, of Washington, D. C., President of the Southern Medical Association, and Dr. E. H. Cary, of Dallas, Texas, who was introduced as the "Father of the Auxiliary to the Southern Medical Association."

A splendid address, "Educate with Hygeia," was given by Mrs. R. N. Herbert, of Nashville, Tenn., chairman of the National Hygeia committee.

The Historian of S. M. A., Mrs. A. T. McCormack, of Louisville, urged the keeping, by each auxiliary, of a scrapbook containing all newspaper clippings concerning its activities. She also told of the work for the "Jane Todd Memorial." Jane Todd was the Kentucky woman upon whom the first ovariectomy was performed by Dr. Ephriam McDowell.

Mrs. S. C. Red, of Houston, Texas, National Historian, spoke briefly of the History of Medicine in her State. She has written a book called "The Medicine Man in Texas," which is to be published shortly.

Owing to lack of time, the meeting was adjourned to continue during the luncheon hour. An address was made by Dr. Gordon Bates, General Secretary, Canadian Hygiene Association, Toronto, whose subject was: "What is Social Hygiene?" This was excellent. He said, in brief: "Social hygiene means health of society; * * * physical health, moral health, mental health and social health are closely related." He told of how health boards came into existence; urged periodic health examinations. Dr. Bates said, "There must be education for young parents and those who would be parents. * * * 200,000 divorces in this country last year means a lot of neglected children. First of interest, must be keeping the families intact. We must have a single standard and let the lower, looser standard be raised higher. Let the standard go up, not down. * * * Cooperation on the part of school, home, and church is necessary."

After Dr. Bates' address, came State reports, which were varied and interesting. All are stressing health education; Arkansas reported a student loan fund for medical students; Georgia has a scholarship fund supported by county auxiliaries, which is helping three boys in Medical School. Space will not permit mentioning all the auxiliaries that are engaged in similar work, as well as welfare work, e. g., sponsoring tubercular preventoriums for children, etc.

At the end of these reports, Mrs. Brawner had only time to give the closing paragraphs of her

President's address. The report of the nominating committee and results of the election will be published in next month's Journal.

Following is Florida's report which was given by Mrs. S. E. Driskell:

Madam President and Members of the Woman's Auxiliary to the Southern Medical Association:

Florida comes to you this year with a report, not of so much concrete accomplishment, but with maturing plans along several lines which will lead to an active program of Auxiliary work.

Since our last year's report of seven active Auxiliaries, we have this year ten, two new ones and an inactive one revived. We are starting a vigorous campaign of organization which we hope will bring great results.

Our work for Hygeia continues good. Every county has made some effort along this line. Broward and Duval Auxiliaries have placed this magazine in every school in their respective counties. The efficient work of the State Hygeia chairman, Mrs. Herrman Harris, Jacksonville, was recognized by her appointment to the National Hygeia Committee at the Detroit convention.

Aside from the Hygeia work, each Auxiliary is active along individual lines. Several meet at the same time as the County Societies, with monthly luncheon or dinner meetings; others find it more satisfactory to meet quarterly. All stress the social side, and the increased friendliness among medical families is the result.

The most outstanding achievement of the Florida Auxiliary was the establishment of an Auxiliary Page in the Florida Medical Journal, beginning with the July number. This appears each month under a most attractive heading. Reactions to its stimulating powers are beginning to reach us. Mrs. Edward Jelks, of Jacksonville, has proven a most able editor, and reports active co-operation and interest from the Journal staff.

Substantial recognition has come from the State Medical Association in the appointment, by the President, Dr. Julius C. Davis, of an Advisory Council of five members of the Association, as requested by the National Constitution. So far, we have not had to call on these advisors for aid, but their interest forms a stimulating background.

A Program Committee is functioning under the chairmanship of Mrs. Leigh F. Robinson, Ft. Lauderdale. Mrs. Julius C. Davis, Quincy, is the

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Florida

able Chairman of Public Relations. Mrs. J. J. Spencer, St. Augustine, is working hard on the revision of the Constitution and By-Laws. Mrs. W. G. Post, Jr., St. Petersburg, as Vice-President, heads the work of organization.

It is with great regret that I am unable to present this report in person, but I am glad that it serves as an introduction to you of our President-elect, Mrs. S. E. Driskell, Jacksonville, whose active interest and hearty cooperation are a source of great satisfaction to me, and a promise to you of a much better report next year.

Respectfully submitted,

MRS. J. RALSTON WELLS,
State President.

* * *

ALACHUA COUNTY

President—Mrs. Wilbur Lassiter, 416 S. Virginia Ave., Gainesville.

Vice-President—Mrs. N. W. Sanborn, 1648 N. Alabama Ave., Gainesville.

Secretary—Mrs. E. H. Andrews, 208 W. Mechanic Ave., Gainesville.

Treasurer—Mrs. S. D. Rice, 524 W. University Ave., Gainesville.

Luncheon meetings are held the second Thursday of every month.

* * *

PINELLAS COUNTY

A report from Mrs. Francis H. Langley, Corresponding Secretary of the Woman's Auxiliary to the Pinellas County Medical Society, informs us that this Auxiliary has voted to unite with the State and National Auxiliary. Plans for the winter's program have not been completed, but the following officers have been elected:

President—Mrs. W. G. Post.

First Vice-President—Mrs. W. E. Morgan.

Second Vice-President—Mrs. H. D. Solomon.

Third Vice-President—Mrs. A. J. Wood.

Secretary (Corres.)—Mrs. F. H. Langley.

Secretary (Rec.)—Mrs. W. W. Harden.

Treasurer—Mrs. B. L. White.

Secretary (at large)—Mrs. O. O. Feaster.

Parliamentarian—Mrs. Carl Williams.

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COUNTY SOCIETY	SECRETARY	MEETINGS				Dues Paid.
		Date	Time	Place	Luncheon?	
Alachua	J. E. Maines, Jr., M.D., Gainesville.	2nd Tuesday	12:00 Noon	White House	Yes.	88%
Bay	Don S. Fraser, M.D., Panama City.					50%
Brevard	I. K. Hicks, M.D., Melbourne.	3rd Tuesday		Varies		91%
Broward	Ralph Lingeman, M.D., Ft. Lauderdale.	2nd Tuesday	8:00 P.M.	Chamber of Com- merce	No.	86%
Columbia.....	T. H. Bates, M.D., Lake City.	1st Monday.	7:30 P.M.	Blanche Hotel		73%
Dade	E. N. McKenzie, M.D., Miami.	1st Friday	8:30 P.M.	Club Room, Huntington Bldg.	Occasionally.	92%
DeSoto-Hardee- Highlands ...	H. V. Weems, M.D., Sebring.		8:00 P.M.	Varies	Yes.	94%
Duval	Kenneth A. Morris, M.D., Jacksonville.	1st Tuesday	8:15 P.M.	Chamber of Com- merce Building	No.	86%
Escambia	J. M. Hoffman, M.D., Pensacola.	1st Tuesday	8:00 P.M.	Board of Health Building	No.	92%
Hamilton	J. R. Bruce, M.D., Jasper.					100%
Hillsboro	J. T. Cowart, M.D., Tampa.	1st and 3rd Tues- days	8:00 P.M.	Tampa Municipal Hospital	No.	84%
Jackson	C. H. Harrison, M.D., Cottondale.	2nd Tuesday	3:00 P.M.	Marianna	No.	69%
Lake	W. L. Ashton, M.D., Umatilla.	1st Thursday	12:30 P.M.	Eustis	Yes	100%
Lee	H. Quillian Jones, M.D., Ft. Myers.	3rd Friday	7:30 P.M.	Lee Memorial Hospital	No.	83%
Leon-Gadsden- Liberty- Wakulla- Jefferson	O. G. Kendrick, M.D., Tallahassee.	Quarterly	3:00 P.M.	Varies	Yes.	86%
Madison	Geo. O. Davis, M.D., Madison.					
Manatee	A. Q. English, M.D., Manatee.	1st and 3rd Tues. Oct. to May; 2nd Tues. May to Oct.	7:00 P.M.	Dixie Grande Hotel	Yes.	92%
Marion	Thos. H. Wallis, M.D., Ocala.	3rd Thursday	12:30 P.M.	Marion Hotel	Yes.	91%
Monroe	W. R. Warren, M.D., Key West.	1st Sunday	9:00 P.M.	Varies	Yes.	
Orange	J. R. Chappell, M.D., Orlando.	3rd Wednesday	8:30 P.M.	Varies	No.	85%
Palm Beach ...	R. G. Lewis, M.D., W. Palm Beach.	2nd Monday	8:00 P.M.	Court House	Yes.	80%
Pasco- Hernando- Citrus.....	Geo. R. Creekmore, M. D., Brooksville.	2nd Thursday	7:00 P.M.	Varies	Yes.	87%
Pinellas	O. O. Feaster, M.D., St. Petersburg.	Every other Friday	8:00 P.M.	500 Power & Light Bldg.	No.	84%
Polk	Herman Watson, M.D., Lakeland.	2nd Wednesday in Feb., Apr., June, Aug., Oct., Dec.	1:00 P.M.	Lakeland	Yes.	95%
Putnam	E. W. Warren, M.D., Palatka.	2nd Thursday	7:00 P.M.	James Hotel, Palatka	Yes.	64%
St. Johns	A. C. Walkup, M.D., St. Augustine.	3rd Tuesday	8:30 P.M.	Varies	Yes.	86%
St. Lucie-Okeech- bee-Indian River-Martin ..	C. L. Davis, M.D., Okeechobee.	3rd Thursday	8:00 P.M.	Varies	Yes.	100%
Sarasota	F. C. Metzger, M.D., Sarasota.	2nd Tuesday	8:30 P.M.	Varies	Occasionally.	75%
Seminole	J. T. Denton, M.D., Sanford.	2nd Friday	8:00 P.M.	City Hospital		100%
Sumter	W. E. Mitchell, M.D., Coleman.	2nd Tuesday		Varies	No.	100%
Suwannee	W. C. White, M.D., Live Oak.					83%
Taylor	R. J. Greene, M.D., Perry.	Last Thursday	12:15 P.M.	Eldorado Cafe	Yes.	60%
Volusia	J. Ralston Wells, M.D., Daytona Beach.	2nd Tuesday	7:30 P.M.	Varies	Yes.	89%
Walton- Okaloosa	A. G. Williams, M.D., Lakewood.	3rd Thursday	8:00 P.M.	Varies	Occasionally.	100%
Washington- Holmes	H. A. McClure, M.D., Chipley.					56%

NOTE—Secretaries: Please submit information to complete the above schedule.

TUBERCULOSIS ABSTRACTS

A REVIEW FOR PHYSICIANS

ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

In slavery days, tuberculosis is said to have been uncommon in the Negro. When he was suddenly freed and thrown on his own resources, deaths from that cause rose steadily. The disease is now about three times as prevalent among Negroes of the United States as among whites. Moreover, the pathology and the course of the disease in the two races are strikingly different. Does the Negro suffer an inherited susceptibility? Has his contact with civilization been too brief to develop the immunity which seems to protect the white race more adequately? Will the handicaps of environment imposed upon the Negro account for the increased prevalence and severity of the disease? Serious searches for satisfying answers are just beginning to be made.

TUBERCULOSIS AMONG NEGROES

Knowledge of the peculiar character of tuberculosis in the Negro that explains the appalling mortality is defective. Statements concerning the clinical course of tuberculosis in colored people are vague. The suggestion is repeatedly made that there are conspicuous differences between the pathological changes produced by tuberculosis in the American Negro and white people. This conclusion is not warranted by the meager facts at hand. Almost nothing is known about the morbidity of the disease among the colored population or concerning the prevalence of minor but not infrequently grave infections which are the precursors of fatal disease.

STATISTICAL DATA IN THE UNITED STATES

Among whites, the death rate for all ages is greater for men than for women, while among Negroes the rate is somewhat higher for women. The disease attacks Negro children with far greater severity than white, the ratio of deaths for the two races between birth and fifteen years of age being 1:9.2, but from fifteen up to twenty-five, 1:3.9. The death rate has fallen rapidly in both races since 1911 but somewhat less for colored than for white. The mortality graph for Negroes is that of a disease that begins in ado-

(Continued on page 290)

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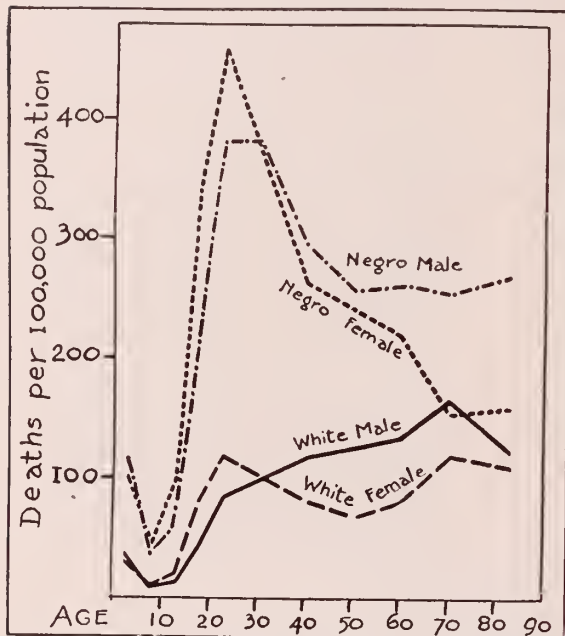
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lence or early adult life and pursues a rapidly fatal course.

TUBERCULOSIS IN AFRICA

The interior of Africa was free from tuberculosis before the advent of the white explorer. Sorel, among others, gives us a glimpse of how the disease was spread. At Bassam on the Ivory Coast, 22.9 per cent of the inhabitants reacted to



Tuberculosis Mortality 1925, U. S. Death Reg. Area of 1920.
—Proceedings N. T. A., 1930, p. 264, Edgar Sydenstricker.

tuberculin, whereas at Bornake, 212 miles inland, only 2 per cent reacted. Ziemann found that, among the 80 natives of the highlands adjacent to Bantu, only one reacted to tuberculin and this man had served as a soldier on the coast. Borrel studied French African troops during the World War. Of recently recruited men brought directly from Senegal to the Frejus Camp, only 4 or 5 per cent reacted to tuberculin. The incidence of tuberculosis increased steadily although earnest effort was made to combat the disease, and the deaths increased from 48 in 1916 to 557 in 1918. The death rate estimated per 100,000 was 624 in 1917 and 1,114 in 1918.

TUBERCULOSIS IN JAMAICA

Jamaica has a population of about 800,000 Negroes and 15,000 whites. Both races have been in contact for three centuries. The disease is primarily one of cities and spreads to country districts. Dwellings are crowded, and the poorer

(Continued on page 292)

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1½ tablespoons Knox Sparkling Gelatine	10	9
¼ cup cold water
1½ cups boiling water
2 tablespoons lemon juice	20	..	..	2	..
½ teaspoon salt	..	..	..	..	..
1½ cups cooked spinach chopped	300	6	..	7	..
2 hard cooked eggs	100	13	10.5	..	..
Total	28	10.5	9	242.5	..
One serving	5	2	1.5	40	..

Soak gelatine in cold water and dissolve in boiling water. Add lemon juice, salt, strain and chill. When nearly set, stir in chopped spinach, mold and chill until firm. Serve on lettuce hearts or tender chicory leaves and garnish with hard cooked egg, cut lengthwise in sixths and sprinkled with paprika. Serve with mayonnaise.

JELLIED CHICKEN IN CREAM

(Six Servings)

Gms. Prot. Fat Carb. Cal.

1 tablespoon Knox Gelatine	7	6	..	..	..
¼ cup cold chicken broth or water	..	..	..	..	..
1½ cups boiling chicken broth, fat free	..	..	..	..	..
½ teaspoon salt	..	..	..	..	..
Pinch pepper	..	..	..	..	..
1 cup cooked chicken, cubed	125	24	20	..	..
¼ cup cream, whipped	55	1	22	1.5	..
Total	31	44	1.5	526	..
One serving	5	7	..	88	..

Soak gelatine in cold liquid for five minutes and dissolve in hot broth. Season with salt and pepper and chill until nearly set. Fold in chicken and whipped cream. Turn into molds and chill until firm. Serve on lettuce or garnished with parsley and strip of pimento.

TOMATO JELLY

(Six Servings)

Gms. Prot. Fat Carb. Cal.

1½ cups hot water	..	..	..	..	..
½ teaspoon salt	..	..	..	..	..
½ teaspoon whole mixed spices	..	..	..	..	..
1½ tablespoons Knox Sparkling Gelatine	10	9	..	..	..
5 tablespoons cold water	..	..	..	..	..
1½ cups tomatoes strained	250	3	..	5	10
2 tablespoons vinegar	..	..	..	..	..
Total	12	..	5	10	92.5
One serving	2	..	..	2	15

Bring to boil, hot water, salt and spices. Soak gelatine in cold water for five minutes and dissolve in hot liquid. Strain into tomatoes and add vinegar. Stir well and pour into molds. Chill until set. Serve plain, or on lettuce, with or without salad dressing.

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people are careless in their habits. In the native Jamaican, tuberculosis usually pursues a rapidly fatal course. While the disease in Jamaica spreads rapidly, its short course doubtless retards its spread.

A relatively small number of autopsies performed on those who have died from tuberculosis in Jamaica show that, whereas the chronic type of pulmonary tuberculosis familiar in white people does occur in the native Jamaican, the disease much more frequently resembles that of children in this country. It has the familiar characters of a first infection, arising in some part of the lung other than the apex and producing massive enlargement and caseation of the adjacent tracheo-bronchial lymph nodes. The lungs and lymph nodes contain no healing or healed (calcified) scars of a preceding infection. Death may follow general dissemination throughout the body. Instances of chronic pulmonary tuberculosis identical with that of white adults in this country occur in Jamaica, but even when the disease is most advanced in the apex, it often has characters intermediate between those of the childhood and adult types of this country, for massive caseous pneumonia is a conspicuous feature of the lesion and there is some caseation of the lymph nodes about the bronchi.

It appears, therefore, that tuberculosis in the American Negro in certain respects is intermediate between that of the native Jamaican and that of white people in the United States.

HEREDITY AND ENVIRONMENT

Discussions concerning the relative importance of heredity and environment as factors of tuberculosis are unprofitable. Environment determines the conditions under which the invading micro-organism enters the body, and inherited susceptibility will determine the varying course of the disease under various conditions of infection. Specific immunity acquired as the result of infection may modify inherited susceptibility. The circumstances under which human infection with tuberculosis occurs are so complex and imperfectly understood that it is doubtful if we have any information that can be used to determine in what degree heredity influences the susceptibility of the Negro race to the disease.

The present information does not show that the Negro race has any hereditary susceptibility to the

(Continued on page 294)



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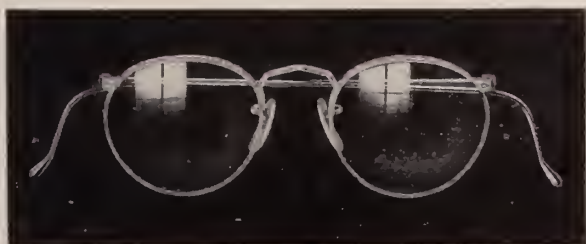
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disease, but this possibility cannot be excluded. Poverty and unfavorable environment certainly favor the spread of the disease. The pathological anatomy of tuberculosis in colored people of the United States indicates that they escape infection during childhood more frequently than the whites and then die from a form of tuberculosis that has all the severity of a first infection. Contagion within the household is the important factor. It is a problem of preventing massive infection.—*The Epidemiology of Tuberculosis of Negroes*, Eugene L. Opie, *Jour. of the Outdoor Life*, Sept., 1930.

STUDIES IN TENNESSEE

In 1927, the death rate from tuberculosis in Tennessee was 96 per 100,000 population for whites and 252 for Negroes. The Tennessee Department of Health is engaged in a special study involving the racial distribution of tuberculosis. Dr. Eugene L. Bishop, Commissioner, who is aided by specialists versed in epidemiology, pathology, and sociology, summarizes some of the impressions derived from the study thus far:

1. There are definite differences in Tennessee between the white and colored races with regard to the total tuberculosis mortality rate, and in the rate by age groups. The difference in mortality rates is most marked in the years of infancy, childhood and adolescence.

2. Evidence is accumulating that similar differences exist in the racial distribution of tuberculosis infection. Results from an admittedly small group of tuberculin tested children suggest the possibility of a higher contact rate among contacts in the colored than in the white race.

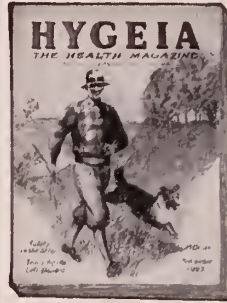
3. The clinical type of the disease observed is different in the two races. The chronic fibroid type of tuberculosis is rare, but not unknown in the colored race.

4. Generally speaking, Negroes present themselves for examination, and begin treatment, in a more advanced stage of the disease.

5. Negroes are less able and less apt to adopt measures calculated to prevent the spread of the disease to other persons.

6. Negroes with tuberculosis are a source of infection not only to members of their own families, and associates, but also under certain conditions to members of the white race.—*Dangers of the Tubercle Bacilli Carrier*, Eugene L. Bishop, *Jour. of the Outdoor Life*, Sept., 1930.

(This review secured by the Florida Public Health Association from the National Tuberculosis Association).



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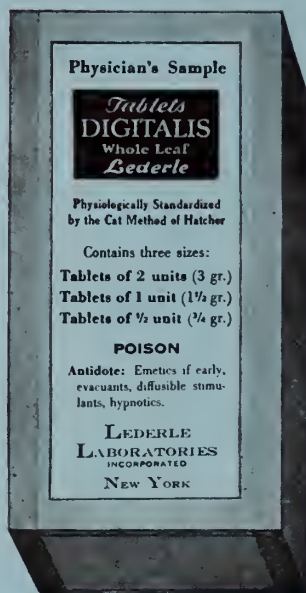
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AN EXAMPLE of satisfying Knox Sparkling Gelatine dishes to satisfy the Hunger-Feeling of Diabetic Patients is shown here—even to a confection for diabetics.

WINTER SALAD

(Six Servings)

	Grams	Prot.	Fat	Carb.	Cal.
2 teaspoons Knox Sparkling Gelatine	4.5	4	..	..	..
1/4 cup cold water	..	..	..	..	..
1/2 cup hot water	..	..	..	..	..
1/2 teaspoon salt	..	..	..	..	..
1/4 cup vinegar	..	..	..	..	..
1 1/2 cups grated cheese	150	43	54	..	..
1/2 cup chopped stuffed olives	70	1	19	8	..
1/2 cup chopped celery	60	1	..	2	..
1/4 cup chopped green pepper	25	..	..	1	..
1/3 cup cream, whipped	75	2	30	2	..

Total 51 103 13 1183
One serving 8.5 17 2 197

Soak gelatine in cold water. Bring water and salt to boil and dissolve gelatine in it. Add vinegar and set aside to chill. When nearly set, beat until frothy, fold in cheese, olives, celery, pepper and whipped cream. Turn into molds and chill until firm. Unmold on lettuce leaf and serve.

DIABETIC CHOCOLATE CANDY

	Grams	Prot.	Fat	Carb.	Cal.
1 tablespoon Knox Sparkling Gelatine	..	6	..	..	..
1 oz. shredded chocolate	30	4	15	9	..
1/8 teaspoon cinnamon	..	..	..	..	..
1/4 cup cream	55	1	22	1.5	..
1 1/2 gr. saccharin	..	..	..	..	..
3/4 cup water	..	..	..	..	..
1/2 teaspoon vanilla	..	..	..	..	..
1/4 cup chopped walnuts	30	6	19	4	..

Total 17 56 14.5 630
One serving 4 14 3.6 158

Soak gelatine in 1/4 cup water five minutes. Mix together and melt the chocolate, cinnamon, saccharin. Add the cream slowly stirring constantly. Then add the water. Add the gelatine. Remove from fire, add the vanilla. Cool the mixture and as it hardens stir in the nuts. Turn the mixture into buttered tins. When hard, cut into slices ready for serving.

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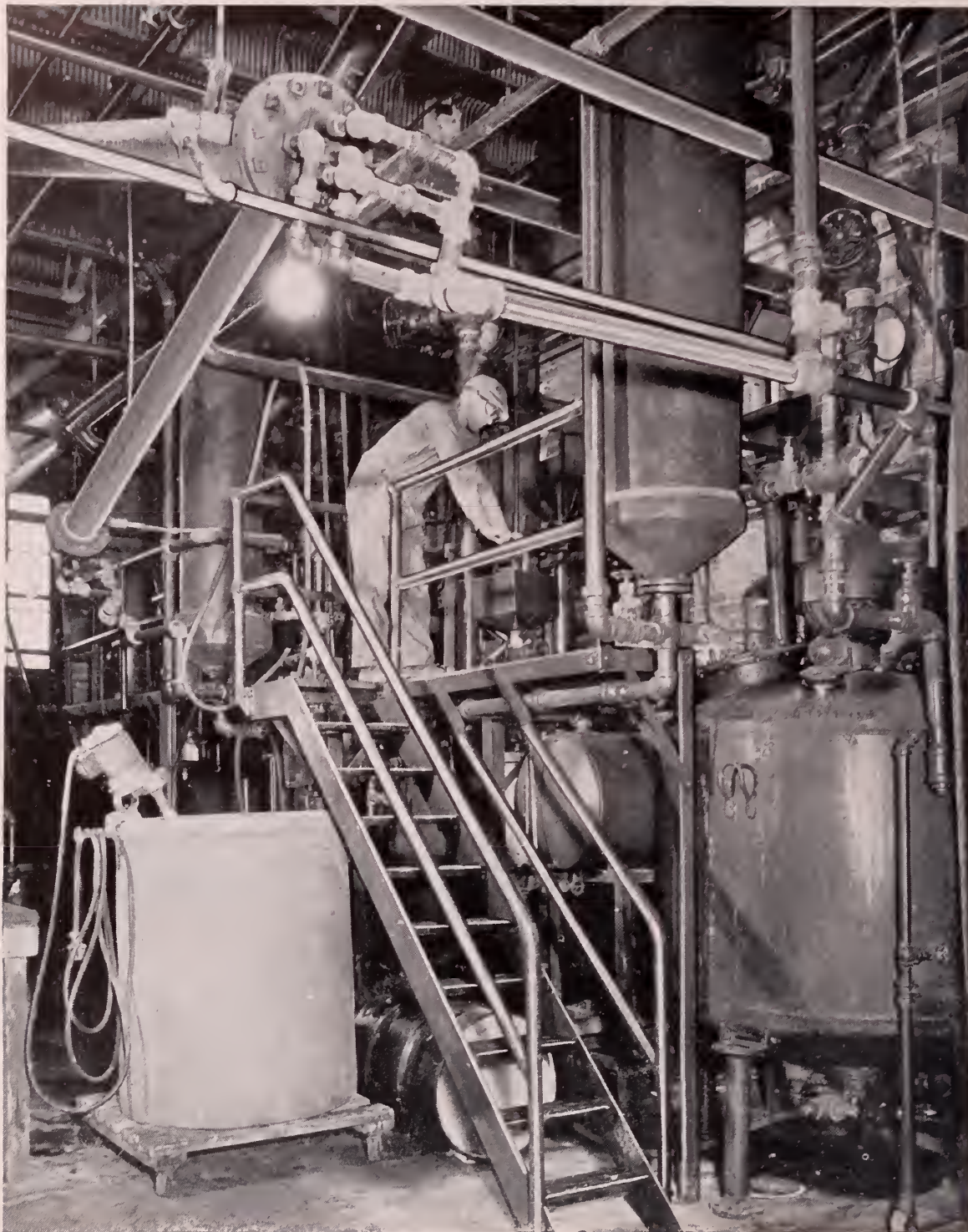
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THE JOURNAL OF THE FLORIDA MEDICAL ASSOCIATION

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SOME GENERAL CONSIDERATIONS OF OBSTRUCTION OF THE BOWEL, WITH A PARTIAL STUDY OF WRITER'S OWN WORK*

J. S. TURBERVILLE, M.D.,
Century.

In spite of the progress in surgery of the abdomen, in general, obstruction of the bowel remains a very serious problem. The serious feature, however, is almost entirely due to delay. Moynahan states that internal obstructions, even now, have a mortality of fifty per cent. It is hard to get a statistical study that is of value in these cases. The very fact that they are such grave emergencies, prevents careful detailed history taking, physical examination, and elaborate laboratory study.

I notice in my own cases that I have very meager data for statistical study. Fortunately, the series is small and as I knew many of them personally I have been able to supply a good deal from memory.

Some years ago my hospital records were lost, and I only have for study forty-eight with anything like complete records. The others have been supplied from memory. There are others, I am sure, but I cannot recall them.

These cases have been handled according to the views of leading surgeons of this country at the respective periods of their occurrence. However, I have not practiced opening of the gut and emptying of its contents, as practiced by Moynahan and others. I have a few times done simple enterostomy; and have put saline and sodium bicarbonate solution in the intestine below the obstruction, lately, only saline. I think intestinal puncture for introduction of saline a safer procedure, as it can be done without danger of contamination. Further, I think the trauma of emptying several feet of damaged bowel, as done by the average surgeon, would produce fatal shock in those very cases that it is supposed to save.

There are a few of these desperate cases that

you can save by simple enterostomy under local anesthesia following the primary operation, after a reasonable interval to determine if nature can empty the bowel. I have never practiced vigorous purgation following these operations, but have allowed the patients to rest, and after 10 or 12 hours enemas have been given, if in the meantime the bowels have not moved.

I have the feeling that many of these patients are over-treated pre-operatively, operatively and post-operatively, trying to overcome some theoretic toxin, the nature of which is not known at the present time. All operations have been performed without evisceration, where it was at all possible. As these patients are all more or less dehydrated, the introduction of water and saline, both by the bowel and under the skin when thought necessary, has been practiced. Solutions of sugar have seldom been used. Where vomiting ceases following the operation, water and fruit juices have been allowed freely by the mouth.

Resection was imperative twice, once from strangulated femoral hernia and the other from post-operative bands. The one from femoral hernia died from toxemia and the breaking down of the anastomosis. Two cases were lembertized over the sulcus produced by prolonged constriction of bands; one of these died of toxemia and shock of operation.

It has been necessary several times to cut away some of the parietal peritoneum or that from the uterus where the gut was attached, to preserve the integrity of the bowel. All raw surfaces, where possible and where it could be done without much delay, have been covered. The omentum has often been used for this purpose.

Four patients have been operated on the second time, and in one of these an enterostomy had to be done, on account of the paralyzed condition of the bowel, following the operation. One small child had a large pebble in the bowel that caused obstruction in an inguinal hernia. It was thought to be a *scybalous* mass at the time of operation, but after the bowels moved, several pebbles were recovered and among these one about the size of

*Read before the 57th Annual Meeting of the Florida Medical Association, Pensacola, May 6, 7, 1930.

the obstructing mass. There was another case of partial obstruction, by the bowel being inflamed and adherent in a mass without discoverable cause at the time of operation. However, a few days later he passed eighteen round worms, and it was thought that these had become entangled and produced obstruction for sufficient length of time to cause inflammation of the bowel just above or at the obstructed point. Once the appendix in the inguinal canal was arched in such a way as to cause the obstruction.

This study is not meant to show any new method of treatment or any new idea concerning the nature of the toxin that causes death, but is intended to point out the seriousness of obstruction of the bowel and the necessity for prompt treatment. I do not recall any death where operation was performed early. You will notice also that the greatest number of deaths occurred in those of prolonged obstruction and badly damaged bowel. Some of these patients had toxic psychoses and among many there were great weakness, lack of appetite, and indifference, the latter often in a marked degree. However, there was once in a while a pleasant surprise, such as a case of fecal vomiting that would recover, or one that would get well following secondary enterostomy.

Number of cases due to post-operative adhesions	14
Number from my own practice	6
Number from practice of other surgeons	6
Not recorded	2
Average time of obstruction 48 hours.	
Poor condition of bowel	8
Number of deaths	1
Cause of death—shock from operation	1
Number of operations in association with other surgeons	4
Mortality 7% plus.	
Congenital bands	7
Poor condition of bowel	2
Average length of time obstructed 48 hours.	
Number of deaths	2
Cause of death—toxemia and shock of operation	2
Mortality 28% plus.	
Intussuceptions	4
Average time obstructed 40 hours.	
Poor condition of bowel	3
Number of deaths	3
Cause of death—toxemia and shock of operation	3
Mortality 75%.	
Number of cases due to inflammatory mass	7
Average time obstructed 48 hours.	
Poor condition of bowel	4
Number of deaths	2
Cause of death—toxemia and exhaustion	2
Mortality 28% plus.	
Inguinal hernia	26
Average length of time obstructed 27 hours.	
Poor condition of bowel	9
Number of deaths	4
Cause of death, pneumonia	1
Toxemia and shock of operation	3
Testicle removed 3 times.	
Mortality 15%.	

Femoral hernia	6
Average time obstructed, not stated.	
Poor condition of bowel	1
Number of deaths	2
Cause of death, pneumonia	1
Gangrene of bowel	1
Mortality 33%.	
Umbilical hernia	1
Mortality none.	
Volvulus	1
Mortality none.	
Total number of cases	66
Total number of operations	70
Youngest five weeks. Oldest 75 years. Mortality for the whole series 20% plus.	

Author consulted Moynahan's Abdominal Surgery.

DISCUSSION

Dr. J. C. Davis, Quincy:

Dr. Turberville has an enviable record considering the duration of illness before operation.

Fitz and Senn, forty years ago, reported a mortality rate of forty per cent. That mortality rate is considered good even today, and no less an authority than Dr. Jeff Miller estimates that the rate is in reality about sixty per cent. Then the substance and summary of the whole may be classed under four headings:

1. Early recognition, which offers the greatest hope for lowering the mortality.
2. An effort to overcome the dehydration, alkalosis and kidney depression.
3. Proper selection of the anesthetic for the individual case.
4. The proper surgical procedure for the given case.

Under the head of early recognition, we might include preventive measures, as it is estimated that from twenty to forty per cent give a history of former surgery for pelvic disease or for appendicitis with drainage. We may expect a marked reduction in post-operative adhesions when the general practitioner learns that a pain in the belly of a severe type, not relieved by enemata and a small dose of morphia in 4 to 6 hours, should be considered at once a surgical case and a competent surgeon consulted. This would reduce a great number of potential candidates for obstruction.

Much valuable time is lost when the patient is first taken ill, by resorting to purgatives. This method fails and the family physician is called, more purgatives are prescribed, opiates, laboratory tests and other time-consuming methods adopted. I am not condemning laboratory methods, but in this condition there is nothing they have to offer that can obviate the necessity for

speedy operation. It would be much better to open the abdomen and find nothing wrong than to delay and find a moribund patient with his diagnosis and prognosis written on his face.

To overcome the dehydration, it has been my custom to use about 3000 c.c. of a 2 per cent salt solution to which has been added 150 grams of glucose, given slowly intravenously in each twenty-four-hour period; as well as to inject every two hours, one to two ounces of the solution into the enterostomy tube.

The selection of the anesthetic depends on the individual case. I prefer spinal anesthesia as naturally we have a hypertension to start with and under this anesthetic the tissues are thoroughly relaxed, and in the absence of an incomplete obstruction gas will be immediately expelled. Also, one can work with more speed, when speed is needed, as every step, right or wrong, that is made shoves these patients nearer the grave. Patients under this anesthesia will often have a decided drop in the pulse rate and leave the table feeling much better than at the beginning of the operation. I have particularly noticed this recently in a case after a resection of 24 inches of ileum.

The incision should be made at a point most serviceable for releasing the obstruction. The enterostomy should be located in a healthy bowel about 10 or 12 inches above the obstruction. It is important, on opening the bowel, to introduce a suction tube and quickly and gently evacuate the contents. Making the enterostomy opening in the greatly distended bowel often facilitates finding the cause of the intra-abdominal obstruction. While it is best not to do too much at any one time, no gangrene bowel should be left in the abdomen. Following the operation, morphine should be given to quiet peristalsis and the patient.

Dr. E. H. Teeter, Jacksonville:

The subject of intestinal obstruction is one thing we are all confronted with, and one thing that all of us are afraid of. In other words, it is the most dreaded type of operation that confronts the surgeon. The mortality is very high.

I feel that when we have a case of this kind, the most important thing is to establish drainage and get the bowel undistended so that the circulation in the bowel can take care of itself.

I had two of these cases at St. Luke's Hospital. One of them was a doctor's wife and the other was a doctor's daughter. One case followed a hys-

terectomy and the other a pelvic inflammatory case with everything tied up with adhesions. I called in a surgical consultation and these men said there was no use to do anything. Patient white about lips, arms cold, pulse 160. I told the two doctors (husband and father of these two patients) that it might do some good to do an enterostomy, and they consented. I did an enterostomy in each case. In the first case, the one that had had a hysterectomy, we did the enterostomy in the room in bed under local anesthesia, did not disturb her at all, and within fifteen minutes the pulse was better, and the whole circulation became better. The other case was more stubborn. We put in an enterostomy tube; gave her oil, and irrigated both ends of bowel with saline. Glucose by rectum. However, both patients lived and are alive today in good health.

We drain the bowel for these reasons: first, we want to get rid of the distention of the bowel, so that the circulation in the bowel will not be cut off; second, we want to get rid of the toxins; and third, we irrigate the bowel thoroughly to get rid of contents of the bowel.

I was certainly mighty glad to hear Dr. Turberville's paper. We general surgeons understand that intestinal obstruction is a most serious thing. We are all afraid of it, and hope some day to get our patients earlier. The earlier we get them the lower will be the mortality rate.

Dr. W. W. McKibben, Miami:

We had a very interesting case in Massachusetts; acute intestinal obstruction in a baby just a few weeks old. A diagnosis of pyloric stenosis was made, operation performed, but no pyloric stenosis found. The case came to autopsy, and was found to have congenital atresia of the duodenum. Complete obstruction there.

On account of the rarity, I wanted to mention it. We all fell down on the diagnosis, which was complete stenosis of the duodenum. The lesson I learned from the case was that I was not justified in diagnosing it as hypertrophic pyloric stenosis, even before the days of X-ray, because the baby vomited bile.

Dr. J. S. Turberville, Century (concluding):

In reply to Dr. Payne's suggestion of the use of hypertonic solutions: Since it has appeared in print I have used this procedure. I have used some glucose at times. But I have seen subcutaneous and intravenous medication so grossly

abused that I am a little prejudiced against too much of it. I candidly know that if I was sick and had to submit to the way some fellows puncture you and keep on at it, I would die, understand, I would die! A lot of people cannot stand it.

I am constrained to believe that the greatest thing to do is overcome dehydration, but I don't know that my results are any better since using hypertonic solutions than just plain water, except that the use of too much plain water increases the liability to pressure necrosis. Plain water will do that much more quickly than saline solutions. I am familiar with the belief in laboratory about hypertonic saline solutions. I have perhaps lived too long, so that I am rather skeptical about a lot of things. I have lived long enough to see things come and go. I don't like to be the first and I don't like to be the last, but I will practice anything that appears to be of any value; however, I shall perhaps practice it with some skepticism.

In regard to the anesthetic: In most cases I use a combination of local anesthesia and ether. I have not practiced spinal anesthesia. I have not made up my mind that it is here to stay. It seems to be; I hope it is. I expect to practice it cautiously, but I have not attempted it yet. I think an ether anesthetic with the proper somebody to give it cautiously is safe, and if you will block your tissues with a local anesthetic, especially in obstructive bowel, you can get some good results that way, and with a very small amount of ether.

Now, referring to drainage of the bowel, there is just one thing to mention. Be sure that you overcome the obstruction. Be sure that you empty the distended bowel into the collapsed portion. That is very important, as sometimes there is more than one obstruction. Warning: I don't think the average man should attempt to empty the bowel. When you pull up many feet of gut over a glass tube you certainly will produce some shock, you cannot help it.

As to toxins: I believe that if you will leave the patient alone when you get through, his bowels will do this work easier. Let him rest. Put him to bed, give morphine for rest and pain as indicated; much purgative medicine afterwards will increase your mortality.

I wish here to state that after this discussion, I had an interview with Dr. Payne and find that I misunderstood his meaning. He meant high concentration of sodium chloride, whereas I had in mind slightly hypertonic solutions in large quantities.

MALARIA CONTROL*

F. A. BRINK, M.D.,

Jacksonville.

My reason for writing on this much-discussed subject is the unusual and increasing prevalence of malaria in Florida and throughout the south. Fifty years ago "ague" seems to have been prevalent in Illinois, Indiana, Michigan and other northern states but at present it is observed but rarely north of Missouri and Tennessee. In the south there seems to have been a gradually decreased prevalence during the half century until the last few years during which time there has been a gradual increase in Florida and neighboring states.

Table No. 1, prepared by Dr. Stewart G. Thompson, Director of the Bureau of Vital Statistics, State Board of Health, shows the number of malaria deaths by counties for the years 1925 to 1929, inclusive. It will be noted that last year there were 470 deaths reported as against 209 for 1925, 223 for 1926, 208 for 1927 and 388 for 1928.

Table No. 2 shows graphically the distribution of the 1929 deaths and in table No. 3, there is a comparison of the number of cases and deaths by counties in 1926 and 1929. It will be noted in this last table that eighteen counties reported more deaths than cases in 1929. In counties where morbidity reporting was good, the ratio of deaths to cases ran from one in seven up to one in 47.

It is freely admitted that malaria morbidity reporting is very bad and the fatality rate is not nearly as high as indicated by these figures. Perhaps one death in 200 cases would be a high rate. Many malaria patients are never seen by a physician and even when they do go to the doctor, he may feel that he is too busy to fill out the report card.

That the malaria prevalence indicated by these figures constitutes a serious health problem will hardly be denied. Its economic importance has certainly not had the thoughtful consideration it deserves. If our business interests could fully realize the influence malaria has on economic conditions, there would be much more interest in malaria control. If the physicians of a malarial area could realize that practice in a community with too much sickness is relatively non-remunerative, their interest would be greatly stimulated. Where industries operate at a loss and fertile acres lie fallow, there can be no prosperity; people

*Read before the 57th Annual Meeting of the Florida Medical Association, Pensacola, May 6, 7, 1930.

TABLE I.

MALARIA—DEATHS BY COUNTIES, 1925-1929, INCLUSIVE

COUNTIES	1929	1928	1927	1926	1925
State	470	388	208	223	209
Alachua	17	7	4	1	6
Baker	2	1	0	0	0
Bay	3	4	1	5	3
Bradford	1	1	0	1	1
Brevard	0	1	2	2	4
Broward	2	1	2	6	4
Calhoun	4	5	10	3	5
Charlotte	0	0	2	0	0
Citrus	5	9	1	3	2
Clay	5	5	1	1	1
Collier	1	0	0	0	0
Columbia	10	6	3	3	5
Dade	3	2	2	8	5
DeSoto	2	0	1	2	1
Dixie	19	15	4	2	2
Duval	9	13	5	6	6
Escambia	8	6	6	8	2
Flagler	1	0	1	0	0
Franklin	4	1	0	0	1
Gadsden	45	22	13	12	20
Gilchrist	4	9	2	2	..
Glades	0	1	0	0	0
Gulf	1	1	0	0	..
Hamilton	7	5	2	1	1
Hardee	0	2	1	0	0
Hendry	0	0	0	0	0
Hernando	3	2	1	1	2
Highlands	1	0	0	0	0
Hillsboro	11	6	8	11	6
Holmes	10	6	5	3	2
Indian River	0	1	1	0	..
Jackson	34	36	20	20	13
Jefferson	24	21	6	7	8
Lafayette	1	5	0	0	2
Lake	1	8	3	4	4
Lee	0	1	1	1	1
Leon	13	4	3	7	8
Levy	20	23	4	6	12
Liberty	4	3	0	1	1
Madison	23	33	15	12	15
Manatee	2	0	6	2	5
Marion	23	13	17	5	5
Martin	0	1	0	0	..
Monroe	0	0	0	1	1
Nassau	1	0	1	1	0
Okaloosa	2	0	0	0	1
Okeechobee	3	1	2	1	0
Orange	4	3	2	6	4
Osceola	3	0	0	0	0
Palm Beach	0	3	1	4	2
Pasco	4	3	3	4	1
Pinellas	4	5	3	7	4
Polk	6	4	5	7	12
Putnam	4	2	1	3	0
St. Johns	2	2	0	2	3
St. Lucie	2	1	0	0	2
Santa Rosa	4	2	0	0	1
Sarasota	1	1	4	1	1
Seminole	5	4	8	6	5
Sumter	11	9	4	6	3
Suwannee	23	24	4	6	4
Taylor	23	20	5	7	8
Union	7	4	0	0	0
Volusia	8	3	3	6	1
Wakulla	13	4	2	0	0
Walton	5	5	2	0	1
Washington	12	8	5	9	2

just move away, property values slump and the doctor is often forced to seek a new location.

Several factors have been suggested as probable causes of the decrease of malaria in the northern states, viz.:

1. Drainage and agriculture reducing mosquito breeding.
2. Quinine cheaper and more generally used; better medical care.
3. Improved housing (screens).
4. Domestic animals divert mosquitoes from man.
5. Prosperity—better food, clothing, greater resistance.

Dr. Henry R. Carter believed that chief among these were the decrease in mosquitoes and better housing (screens).

The essential conditions necessary before malaria can become prevalent in a community are:

First, anophelene mosquitoes, which presupposes proximity to suitable anophelene breeding areas; second, these mosquitoes must feed on the blood of malaria patients and, third, these infected mosquitoes must feed on uninfected persons to inoculate them.

There are a number of factors which may prevent the spread of malaria even when conditions seem right for it to spread. Though the mosquito carrier is plentiful, there can be no transmission in the absence of a human source of infection. Very often malaria is introduced by immigrants into a community where, in the presence of constant anophelene breeding, it has not occurred for years. Control of the human reservoir, then, by keeping him in a screened house or under a net or by rendering non-infectious to mosquitoes by administering appropriate drugs, is a useful anti-malaria measure. Two drugs are known to be useful in malaria control; quinine for the destruction of the parasites in the blood and plasmochin for the more prompt elimination of the gametes—the sexual forms which reproduce in the mosquito.

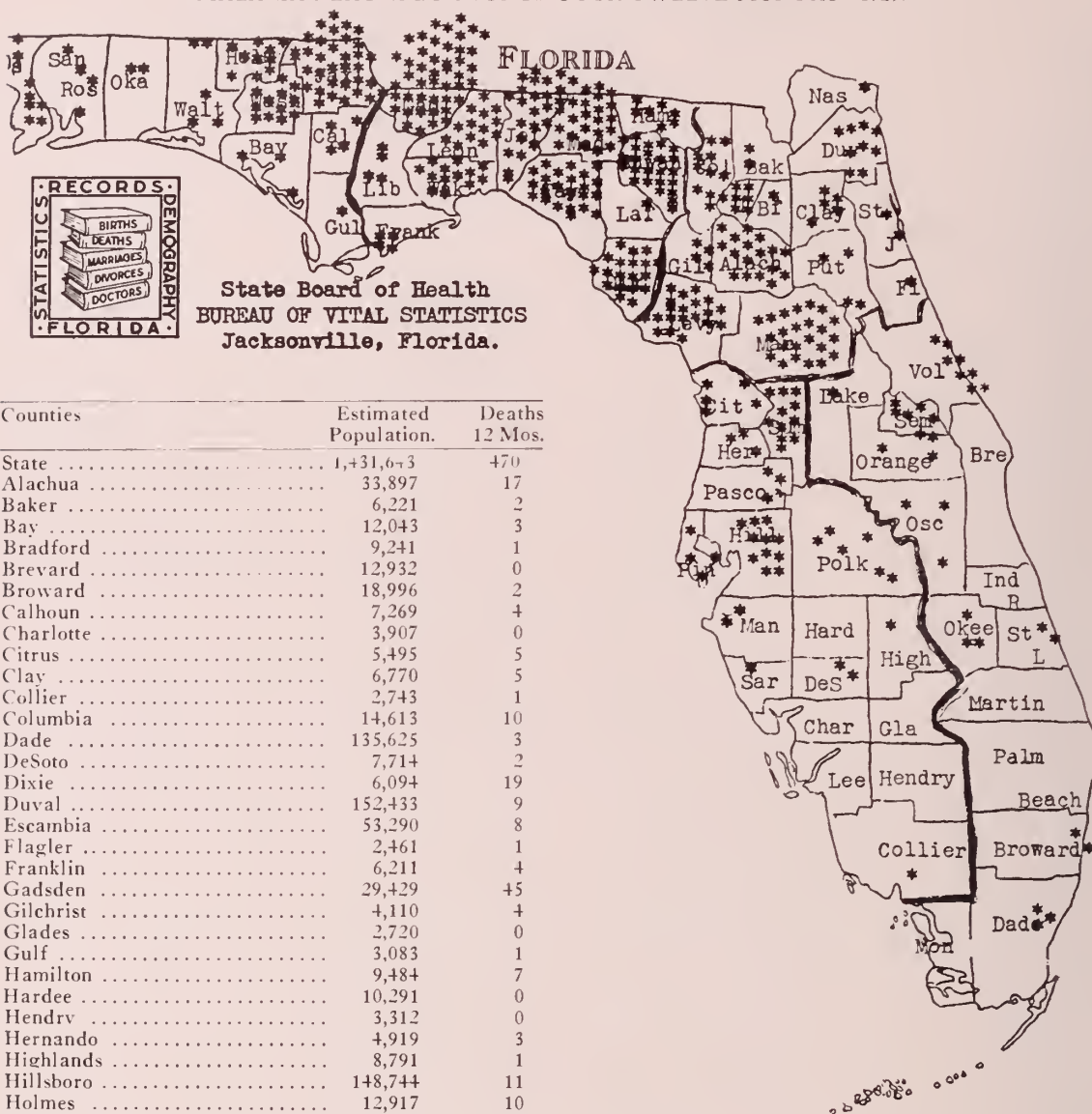
Malaria prevention by means of anti-mosquito measures we need not discuss in detail. It is enough merely to mention filling, draining, clearing, flooding, (marsh lands), stocking with fish, oiling and dusting, but we should remember that selection of the best control measure may require careful thought and consideration. Where the breeding area is very large and the population sparse, it is not practicable to attempt mosquito control, and other anti-malarial measures must be utilized.

TABLE II

The following table indicates the number of deaths from malaria, by months, for 1929, as compared with the previous year:

Year.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1929	24	7	15	14	30	40	65	59	72	71	40	33	470
1928	9	9	13	10	24	16	26	36	39	84	74	48	388

MALARIA DEATHS BY COUNTIES FOR TWELVE MONTHS—1929.



Counties	Estimated Population.	Deaths 12 Mos.
State	1,431,673	470
Alachua	33,897	17
Baker	6,221	2
Bay	12,043	3
Bradford	9,241	1
Brevard	12,932	0
Broward	18,996	2
Calhoun	7,269	4
Charlotte	3,907	0
Citrus	5,495	5
Clay	6,770	5
Collier	2,743	1
Columbia	14,613	10
Dade	135,625	3
DeSoto	7,714	2
Dixie	6,094	19
Duval	152,433	9
Escambia	53,290	8
Flagler	2,461	1
Franklin	6,211	4
Gadsden	29,429	45
Gilchrist	4,110	4
Glades	2,720	0
Gulf	3,083	1
Hamilton	9,484	7
Hardee	10,291	0
Hendry	3,312	0
Hernando	4,919	3
Highlands	8,791	1
Hillsboro	148,744	11
Holmes	12,917	10
Indian River	6,487	0
Jackson	31,917	34
Jefferson	13,486	24
Lafayette	4,357	1
Lake	22,396	1
Lee	14,448	0
Leon	23,075	13
Levy	12,268	20
Liberty	4,132	4
Madison	15,680	23
Manatee	21,926	2
Marion	29,165	23
Martin	4,894	0
Monroe	14,059	0
Nassau	9,516	1
Okaloosa	9,854	2
Okeechobee	3,984	3
Orange	47,554	4
Osceola	10,444	3
Palm Beach	49,236	0
Pasco	10,445	4
Pinellas	59,672	4

Counties	Estimated Population.	Deaths 12 Mos.
Polk	69,830	6
Putnam	17,836	4
St. Johns	18,267	2
St. Lucie	6,820	2
Santa Rosa	14,050	4
Sarasota	11,825	1
Seminole	18,168	5
Sumter	10,435	11
Suwannee	16,027	23
Taylor	12,995	23
Union	7,271	7
Volusia	41,338	8
Wakulla	5,443	13
Walton	14,399	5
Washington	12,151	12

Legend: *One death.

STEWART G. THOMPSON,
Director.

TABLE III.

MALARIA CASES REPORTED COMPARED WITH MALARIA DEATHS.

COUNTIES.	1929		1926	
	Cases	Deaths	Cases	Deaths
State	1535	470	400	223
Alachua	28	17	4	1
Baker	24	2	0	0
Bay	2	3	3	5
Bradford	0	1	0	1
Brevard	1	0	2	2
Broward	4	2	10	6
Calhoun	4	4	2	3
Charlotte	4	0	0	0
Citrus	6	5	14	3
Clay	5	5	1	1
Collier	0	1	0	0
Columbia	27	10	2	3
Dade	32	3	38	8
DeSoto	41	2	3	2
Dixie	69	19	0	2
Duval	68	9	29	6
Escambia	27	8	15	8
Flagler	0	1	0	0
Franklin	1	4	0	0
Gadsden	312	45	17	12
Gilchrist	10	4	0	2
Glades	0	0	0	0
Gulf	1	1	0	0
Hamilton	2	7	1	1
Hardee	5	0	2	0
Hendry	0	0	0	0
Hernando	2	3	1	1
Highlands	0	1	0	0
Hillsboro	98	11	19	11
Holmes	37	10	12	3
Indian River	7	0	11	0
Jackson	104	34	10	20
Jefferson	15	24	4	7
Lafayette	4	1	0	0
Lake	7	1	3	4
Lee	1	0	9	1
Leon	22	13	11	7
Levy	12	20	28	6
Liberty	2	4	1	1
Madison	30	23	6	12
Manatee	1	2	3	2
Marion	39	23	22	5
Martin	0	0	1	0
Monroe	0	0	1	1
Nassau	2	1	1	1
Okaloosa	2	2	0	0
Okeechobee	2	3	2	1
Orange	3	4	3	6
Osceola	1	3	0	0
Palm Beach	6	0	14	4
Pasco	5	4	2	4
Pinellas	15	4	15	7
Polk	20	6	8	7
Putnam	18	4	12	3
St. Johns	94	2	11	2
St. Lucie	1	2	0	0
Santa Rosa	1	4	1	0
Sarasota	0	1	2	1
Seminole	4	5	11	6
Sumter	34	11	8	6
Suwannee	26	23	5	6
Taylor	90	23	2	7
Union	41	7	2	0
Volusia	11	8	4	6
Wakulla	8	13	0	0
Walton	11	5	1	0
Washington	86	12	5	9

Some years ago, in a Texas community, shortly after the erection of a bat roost, mosquitoes and malaria prevalence decreased markedly and the improvement was credited to the bats. It was observed, however, that other anti-mosquito work might have brought about the change. When this work was abandoned, the mosquitoes and malaria again became prevalent and the bat roost is not now looked upon as a practical control measure.

More recently the cultivation of alfalfa and other plants has been proposed as a control measure. The value of this and particularly its applicability in Florida is yet to be definitely proven.

Probably the most useful of all anti-malarial measures is mosquito-proofing the home. Inexpensive and effective methods of building screen doors, screening windows, closing small openings in shacks by papering inside with heavy paper and preventing the entrance of mosquitoes through chimneys have been worked out by the U. S. Public Health Service, utilized successfully in several southern states and are now being demonstrated in Florida by the State Board of Health.

The use of quinine, five or ten grains a day at suppertime or bedtime, will control malaria, *i. e.* prevent the symptoms. It is the claim of some that ten grains a day will cure most cases in 8 weeks. Others adhere to the more intensive treatment and the use of much larger doses. At any rate, quinine is the sheet anchor in malaria treatment, should be administered under a doctor's supervision and the treatment continued until the patient is cured. Self-treatment and the use of chill tonics are expensive in the end and should be discouraged.

By means of educational measures and with the cooperation of the medical profession, we hope to prevent human waste from malaria.

After all, the people must, for the most part, do their own preventing. Our duty is to teach them how, show them the relative value of the various preventive measures, and stimulate them to action. It is our hope that the medical profession will support and supplement the efforts of the State Board of Health. Florida, more perhaps than any other state, can profit by maintaining the best possible health conditions.

DISCUSSION

Dr. L. M. Anderson, Lake City:

This is a question cussed and discussed for many years—malaria.

Now, about these statistics. There is one little point about there being more malaria now in the south than previously. We should have more. There are more people; therefore, we should have more malaria. And we get better reports, reports from rural localities from which we never received any before. I agree with Dr. Brink, positively, that we must control malaria as far as possible. But we have had some things reported around the large communities that are very detrimental to the laymen. We have some doctors who, I understand, say they can give shots which will prevent malaria.

There is no medicine that will prevent malaria. You might give quinine enough and live in a malaria country and it would not develop. The only remedy for malaria is quinine and arsenic. Chronic malaria is hard to control. I have recently had under my observation three cases of chronic malaria, one of twelve months' standing. After using quinine (I usually in stubborn cases first give quinine with hydrochloric acid and get good results) I give plasmochin and quinine three times a day for one week, omit for four days and start again on the fifth day, continuing that treatment for six weeks. I have had no return in either one of these three cases, which date from the first of November.

As to the Florida Medical Association backing up the State Board of Health: Every man here ought to be an advertising agent for the State Board of Health. It has made Florida. I hope that we can just keep it up and improve it. We need some propaganda to go out to the laymen with that little talk: "No use in having malaria. It is preventable." Screening is a good thing. You can't make people do anything by law any more. There has been the day and time when people were law-abiding citizens. That is past. I want to say this: Let's get together and stamp out malaria in Florida. There is no sense in labeling Florida as a malarial state.

Dr. Henry Hanson, Jacksonville:

The problem presented by Dr. Brink is undoubtedly the most vital one facing Florida at the present time. A glance at the chart shows 470 deaths reported from malaria within the past year. We have used an estimate of 200 cases of malaria for every death which brings the total number in cases up to 94,000 for the year.

A consideration of the financial loss implied by this number of cases is also made on the basis of an estimate in which we calculate a minimum aver-

age loss in time due to sickness with this disease as five days for each case. The lowest estimate has been placed at \$1.00 per day which would represent \$5.00 each for the 94,000 cases or \$470,000 financial loss within the year from this one disease alone.

Dr. Brink in his work has also brought out the very important fact of the high prevalence of hookworm infestation throughout the malaria area in which it has been found in limited surveys that from 25% to 80% of individuals examined show the presence of hookworm eggs in their stools. The seriousness of the hookworm incidence lies in the fact that very many in the rural communities have no sanitary privies which means a daily pollution of the soil about such premises. One finds in the literature statements of the fact that a female hookworm will deposit thousands of eggs within a period of 24 hours. One statement places the number of eggs from one female at 9,000. One only has to consider the possible number of worms harbored by each individual to get an idea of the amount of pollution which will take place. It is the combined effect of these two diseases which makes the problem presented by Dr. Brink one of the most important economic factors throughout the rural communities of the state. It is hoped that the entire profession of the state will renew their interest in this problem and support the program for its correction. It will mean money to the doctors and it will mean money to all enterprises within the state. When you rid these unfortunate individuals of their hookworms you can cure the malaria and they will work earning and spending money and there will be something left over to pay the doctor's bill when he is called.

Dr. F. A. Brink, Jacksonville (closing):

In answer to the remark about population: In 1927 there were 208 deaths; in 1929, 470 deaths reported. Certainly since 1927 the population of the state has not doubled.

The question of "shots" is interesting, particularly in connection with the therapeutic use of quinine intravenously. I, personally, am not very strong for it. In fact, I believe that nearly every case can be treated as successfully by giving quinine by mouth, unless, perhaps, the person is desperately sick. If not, I think they should be treated by mouth.

The use of plasmochin should be continued with care. Dr. W. E. Deeks, of the United Fruit Company, reported at the Southern Medical Conven-

tion that one plasmochin compound pill was sufficient to render a patient non-infective to mosquitoes, but that the use of plasmochin was of no particular therapeutic value to the patient himself and we still have to rely on old remedies for cure of patients.

Dr. Hanson referred to the financial loss due to sickness from malaria, but did not touch upon the loss on account of deaths. Four hundred and seventy individuals lost from the state by malaria at a minimum value of \$3,000 each would represent nearly one million and a half dollars financial loss to the state last year.

I wish to thank the gentlemen for their discussions.

THE PURPOSE AND IDEALS OF THE STATE BOARD OF HEALTH*

H. MASON SMITH, M.D.,

Tampa.

You must know that it is somewhat embarrassing to me to make a public health address to an audience in which there are so many distinguished men and public health experts. While I have the medical background which gives me an intelligent appreciation of the results obtained by organized public health work, I have had no training in this important branch of medicine. The attitude assumed by me is one of a layman and my remarks are directed from a layman's viewpoint.

We feel that our pioneer statesmen who built the governmental machinery of this State displayed wisdom in that provision which stipulates that for the members of the State Board of Health the Governor shall appoint three citizens. It is generally believed that these three citizens should be laymen so far as public health training is concerned. The board then acts somewhat as a balancing wheel to the scientific and trained men in the administration of public health measures and probably, at times, prevents the scientific personnel of the department from instituting measures for which the public may not be prepared and, therefore, impractical in application.

This very point, I believe, touches one of the most important functions of the Board of Health, which is education of the public in preventing sickness. The time was, not in the remote past, when the main purpose of any health organization was considered the control of communicable diseases and the list of the diseases considered com-

municable was indeed a small one in comparison with the list we are interested in today, and that list was limited to air- and water-borne diseases. There has been a widening of this scope of activity until now the function of a board of health is to prevent sickness or preventive medicine.

As preventive medicine cannot be carried further than the health departments can receive the cooperation of the masses, education of the masses becomes one of the most important functions of any health department. It is the purpose of the Florida State Board of Health to build up and maintain an institution of high professional character with a personnel capable of carrying on this educational campaign in the most effective way.

Besides the direct contact that is made by the State Board of Health with the people it is essential, in order to reach the masses, that we work through various agencies and only professional men of the highest qualifications and character can make the appeal which will obtain the desired support from these agencies.

So far we have found the medical profession, the educators of this State, the women's clubs, the various civic clubs, magnanimous in their support and wonderful emissaries of the message of preventive medicine. Through these organizations, especially the teachers, people have been reached who were before inaccessible to public health thought.

In spite of all this activity a large number of our population has not been reached. The charts on display here portray a picture of mental and physical enfeeblement in our rural sections, which is due to malaria and hookworms, that is tragical. Surveys that have been made show that these diabolical and insidious parasites, through their influence on the health of the people, have been destructive to agricultural productiveness and have reduced the economic condition of our rural sections in the fertile agricultural country of the northern part of the State, to poverty. These people have been so reduced that they cannot employ a physician. There are not many teachers among them. The children, by virtue of mental enfeeblement due to disease, are incapable of absorbing information even about their own physical conditions. The women's clubs and civic clubs do not reach that far out. There is no agency on which we can depend to carry to this unfortunate class the information necessary to their wellbeing. It is not only our ideal, but our purpose to reach these people directly, to give them their birth-

*Read before the State Public Health Conference, Jacksonville, December 8-10, 1930. Published simultaneously in Florida Health Notes.

right of health and this will automatically restore the economic conditions in the sections concerned.

In order to accomplish this stupendous task it will be necessary to procure health units in each county so badly infested. It is imperative, as I see it, that these county organizations function under the supervision of the State Board. By placing the control remotely or with the State Board of Health local politics and personalities which usually impair the function and efficiency of a health organization in a small community will be eliminated. The management then will be most efficient and free from the influence of patronage.

It is the purpose of our department to be a co-ordinating center for all health activities in the State. Even the municipal health organizations will prevent duplication, conserve energy and effort by utilizing the information which has been obtained and correlated by the various departments of the State Board. The situation is somewhat analogous to the human body, the State Board corresponding to the central nervous system, supplying the organs with information and motor energy which causes each organ to function for the welfare of the body as a whole.

For the activities of the United States Public Health Service, the International Health Board and other philanthropic agencies engaged in preventive medicine of various types the State Board of Health must necessarily be the sub-station and correlating center, if their work is to be effective.

While our purpose is well defined and clear and all humanly possible is being done toward its accomplishment, the handicaps are tremendous. Our personnel is short. Our office space is inadequate. At present the department of Vital Statistics is occupying rented quarters up town at a cost of \$330 per month, which is equal to 6% interest on \$66,000. The Engineering Department is in the animal house. The Bureau of Child Hygiene has absorbed all of our library space.

The only source of revenue which the State Board of Health enjoys is the one-half mill levy which brings an income of about \$280,000 per year. This is being absorbed by the maintenance of our present organization. It is inadequate to cure any of the deficiencies just mentioned and to continue to function efficiently. With the responsibility which we feel as an agency that has been built for the protection of the health of the people of this State we cannot further reduce our personnel or curtail any of the activities now being carried on.

It would only require one-fourth mill in addition to our present income to make possible the accomplishment of these ideals. With this amount we could house our organization and equipment, we could extend such financial aid to county units as would assure their creation and maintenance and give the State Board of Health the administrative supervision which is so necessary for their efficiency. With this we could meet the increasing perplexities of preventive medicine in a growing population. We could completely eliminate from our people many communicable diseases which have been such a menace to life, chiefly and most certainly of these is diphtheria. We would have that potentially which would enable us to check any epidemic in its infancy, and before it had reached many people, and lastly we could advertise to the world that our State is the safest place in which to live.

In closing, may I seek your indulgence for time to say that my connection with public health brings me the greatest sense of pleasure. The contacts with professional people in this field of medicine in whom I have seen such unselfish devotion to duty have been inspiring to me. Being a member of an organization whose purpose is protection of life, whose ideals are so altruistic and which is an agency designed for the protection of a great State causes me to feel that my own life is being made less selfish and more worthwhile.

OUR HERITAGE*

ROY J. HOLMES, M.D.,
Miami.

There are few greater privileges than those given to the sons of that broad-minded generation of medical practitioners whose geniality and wisdom, kindness and strength, breadth and precision, has inspired the world to refer to them lovingly as "the old country doctors." Those of us who were fortunate enough to have our first youthful struggles inspired by such characters realize that ours is a heritage unusual in its magnificence and incomparable as a constant source of pleasant memories.

The noon-day meal is finished. The master of the house has barely begun his customary nap when the doorbell rings. There is a conference during which a voice quivering with despair stands out in striking contrast to the kind, sympathetic

*President's address delivered at the Fourth Annual meeting of the Florida East Coast Medical Association at Melbourne, October 2, 1930.

tone of assurance. A few minutes later a negro boy ambles lazily in the direction of the barn. Presently he emerges leading the finest horse in the county hitched to a Barnville buggy of the latest design. Quickly, and with some of the pomp of a Roman emperor, we cover the few blocks comprising the main street of the town. Just beyond the city limits the check rein is loosened. The high-spirited stride diminishes to a comfortable walk, and the long grind to the "country" is begun.

Is there anything more soothing to the erratic, developing mind of childhood than the rhythmic grind of buggy wheels over a sandy, country road? Is there anything more fascinating than passing visions of unexplored territory lying beyond each bend, or a long shady lane where the road submerged beneath a stream of cool, sparkling water? Surely one of the thrills of a lifetime came when I was permitted to wade, sans trousers, to the opposite shore while the horse stopped in the middle of the stream to plunge his eager nostrils beneath the surface.

Another page in this book of memory and we see an unpretentious room in a country farmhouse. There are holes and cracks in the floor through which an occasional chicken may be seen escaping the noon-day sun. Fishing poles and long strings of red peppers hang from the rafters above. The walls, plastered with comic sections from last year newspapers, suggest a rather pitiful attempt to divert the mind from hardships offered by the outside world. A cheap bed stands in a darkened corner and seems barely able to support the haggard, emaciated body of its occupant. Nearby, and in the shadows, we see the profile of the man whose very presence commanded the greatest respect and admiration. Silently and gravely the examination is made. A few questions, a few more carefully chosen words of reassurance, a serious look at a trembling tongue, and expert fingers delve carefully into a bag containing dozens of bottles and thousands of pills.

This man and his kind left us a heritage in his ideals of honesty, self-sacrifice, modesty, and kindness. He was often the community's best citizen as well as a builder of citizens. Under his influence, the profession enjoyed more of the public's confidence than at any previous time, and it is doubtful if we of today excel him in this respect. He was welcomed into any society and held his patients devotedly from the cradle to the grave.

I would not attempt to add to either the many songs or stories that have been written in tribute to this grand old man of medicine. Within recent months, however, there has been a tendency on the part of the cynical to minimize his contribution to our art. It is quite possible that a few of our younger men are possessed with the idea that our traditions regarding him should be taken with a grain of salt. We are reminded occasionally of the appearance of his office, of his disregard for surgical cleanliness, and of the many mistakes which he made and buried.

Let me remind you that with only two years of very inadequate medical training, many of these men were acute diagnosticians and it is doubtful if their ability with the stethoscope has ever been excelled. Their era began with the work of Louis Pasteur, with which we are all familiar. It records the antiseptic work of Joseph Lister, the laboratory work of Koch and Von Behring, Klebs, Loeffler, Eberths, and the Americans, Simon Flexner and Theobald Smith. It produced a Bigelow, Keen, Ephriam McDowell, J. Marion Sims, Thomas Addison Emmit, Spencer Wells, Lawson Tait, Austin Flint, Van Buren, Pepper, William Osler, John B. Murphy, and many others equally as notable.

Perhaps the greatest of all medical discoveries came during their day when a country doctor gave us ether anesthesia. A. J. Mooney tells us in beautiful yet forceful words that "Evanescent man-made history may attempt to penalize a man for being modest. The mercenary enthusiasm of a dentist who plagiarized may place the laurel upon the undeserving brow for a time, but truth, always right, places the laurel upon the brow and memory of Crawford W. Long."

The discovery of the spirocheta by Fritz Schaudinn which was followed a few years later by the discoveries and conceptions of August Von Wassermann and Paul Ehrlich stand forth within themselves as magnificent achievements.

It would be very interesting, indeed, to take you backward at length through the pages of medical history. We would like to stop for a while and review the work of Smellie who gave us our present conception of obstetrical forceps in 1774; of the great colonial surgeons, John Warren and Wright Post, who successfully performed radical amputations and operated for femoral aneurysm during Washington's day.

We would like to begin at the very beginning of recorded medical history; with Pythagoras, the Philosopher of Samos, and review the works of

Hippocrates, Aristotle, Herophilus, Celcus, and Galen. Together, we could value the heritages given us by Maimonides, the first great Jewish physician, Leonardo and the other great anatomists of his day; of William Harvey, Ambroise Pare, William Collen, John Hunter, Benjamin Rush, and thousands of others. But we are not primarily concerned with medical history at this time. We prefer to consider very seriously the intrinsic value of the heritages which we possess today as a result of the work, examples, and conceptions of the men who have made medical history.

In short, let us gather together every contribution that has been made to this art of ours. What a glorious heritage this is! With the exception of Christianity, it is possibly the most priceless treasure that has ever been given to the human race. All the wealth in the world could not purchase it. Many have died in its defence and others that its value might be increased. It is the refuge of mankind in times of suffering as well as the hope of the helpless babe when its existence is threatened. It is a ray of light to the wounded soldier, and brings peaceful dreams to the aged and hopeless. The gift is to all humanity. You and I are its principal guardians.

Are we, as medical men of today, deserving of this great trust? Are we a credit to the present generation for the manner in which we have cared for this priceless heritage? It is well for us to reconsider these questions occasionally and judge ourselves by the standards and examples given us by the great men of the past.

Personally, I cannot lament the so-called medical decadence of our times. I believe that there is a potential Ronald Ross in almost any large office building, and that the leaders in our profession today compare favorably with any of the medical men of yesterday. Surely the names of Banting, Joslin, Deaver, Mayo, and Crile, together with hundreds of others, will be superb additions to the history of medicine.

The fact is that we have gone far beyond the remotest dream of our medical fathers because of this wonderful heritage which they have given us. I say this after considering fully the admonition of Keyes that "the contemplation of the children of our minds so fills us with paternal pride that sometimes we even forget that they are adopted waifs."

But what about this fickle Jade, Public Opinion? What is back of this flood of vicious flings at a great group of practitioners who have so

much to offer at the shrine of humanity? Would our legislature place a knife in the hands of the unscrupulous and untrained who are now permitted to attempt major operations if they thought for one moment that such a law would meet with severe public resentment? Only the uninformed have failed to grasp the significance of the epidemic of medical idol-smashing and quack-elevation which occurs with increasing regularity in many of our newspapers, anti-medical periodicals, and even some of our best national magazines. The people evidently like it or else the publishers would not purchase the material. What then is behind this iconoclastic attitude of a people who used to love and honor their doctors?

The answer to these questions may throw some light upon the perplexing problems of medical economics which are now being studied by some of the best minds in our ranks. The old country doctor was not a pauper by any means. He owned a large portion of the town in which he lived and probably never mailed a statement.

The truth is that medicine has made such progressive strides during the past three or four decades that even those of us who are medical minded, so to speak, are having serious difficulty in keeping abreast of the procession. How then can we expect the general public to emerge from that wilderness of ignorance, prejudice, and superstition regarding medical matters when, as Kant says, "their information is limited to such parts or aspects of an object or concept as their store of knowledge and their habits of thought permit them to assimilate"?

At times I am fully convinced that Mars is an open book compared with the general public's conception of the traditions, ideals, and general understanding of the medical profession and its objectives. The average candidate for criminal abortion apparently does not understand our refusal to perform the operation and usually makes her exit with the entreaty, "Well, Doctor, if you cannot do the operation of course you wouldn't mind sending me to somebody who will." The average patient cannot understand why medical men do not patent their ideas any more than they can understand why we do not become elated over the idea of stealing the other fellow's patient. Did our legislature consider, for one moment, at the time when they placed their premium on illiteracy that if it had not been for the work, suffering, and death of members of that immortal trio composed of Walter Reed, James Carroll, and Jesse Lazear we might still be quarantining the State from one

end to the other every few years against the yellow murderer that wiped out more than half of General Leonard Wood's staff and killed more American soldiers than the Spaniards killed? Has the contempt for danger which comes with comparative safety so blinded our people that they have forgotten that at one time typhoid fever was very prevalent in this beautiful State of ours, and that our present agreeable relationship with Cuba and Central and South America is largely the result of the work of Leonard Wood, Gorgas, and other medical men? Has the average high school graduate ever been told that prior to 1798 when Jenner first introduced vaccination against smallpox, fully fifty per cent of the male adult population of this country showed the disfiguring effects of this dread disease which, prior to that time, had continuously ravaged the entire civilized world? Do those who read and approve of these violent articles against vivisection know that the benefit to mankind resulting from the discovery of diphtheria antitoxin alone, has been sufficient to build a monument as high as the sky to every dog that ever died on the vivisection table?

The whole subject is one crying for enlightenment and education. We have a wonderful story of progress and achievement to tell the people. Let us tell it without apologies and without stammering. It is time for John to speak for himself and our present pitiful attempts to do so over the radio are like hunting elephants with air rifles. We need an intensive, nation-wide campaign of direct personal education carried on by physicians themselves. There should be regular and persistent replies of exposure to every cynical derogator of the healing art. We should make our votes and our influence of power, politically, and second to none in the State or else we shall continue to be laughed at by our legislatures and dismissed from court rooms as prejudiced witnesses followed by the sneers and jeers of many in the audience. The profession should be represented through its official channels on one of the large nation-wide broadcasting systems and these great contributions to the progress of the world should be re-enacted with all their tragedy, drama, and pathos by trained actors and speakers. The leaders in our profession who are known to the public should not fail to respond to every invitation to address that public.

We should not close our eyes to the fact that the present generation is looking for thrills and that a subject in order to be thrilling does not

necessarily have to be spectacular in the same sense that the showman uses the term. Paul De Kruif's "Microbe Hunters" has been one of the best sellers during the past year. "Why We Behave Like Human Beings," and many other examples of pseudo-medical literature found in the show windows of any book store should convince us that the public at the present time is in a receptive mood for these subjects if they are made extremely interesting.

Yes, I am willing to plead guilty of being a dreamer, an idealist, or a sentimentalist regarding the traditions of our profession. But regardless of how cynical or practical our views may be, the fact remains that tradition is a very pleasant thing to live by. Tradition is usually to be found associated with idealism. You may call these feminine qualities if you like, but, as in our civilization, the feminine principle is the factor which prevents our profession from assuming a condition of sour sordidness.

As Will Durant distinguishes between the cultured and the educated, so must we realize that scholarliness is not attained through acquirement of the fundamentals of medicine; nor does exceptional proficiency in some given branch of medicine bring it. In the recent progress of medicine, many of our younger men have become tintured with the materialism that surrounds us on all sides. In his eagerness to make a material success of his medical career, he runs the risk of separation from that idealism which has contributed possibly as much as anything else to securing for medicine the position it holds today. To hold fast to that idealism, we must develop within ourselves and in our medical schools a regard for tradition and a veneration of the great characters in medicine around whom tradition is enveloped.

Just as these truisms apply to our national and family life, so may they be applied to our medical life. Who among us has not been moved by the solemn strains of "The Star Spangled Banner"? What Southerner has not experienced a desire to throw his hat into the air and yell when the band played "Dixie"? These emotions were stirred not alone by the music, but possibly more so by the traditions which they recalled. It is then that we become idealists and reverence the heritages given us by such men as Washington, Lincoln, Grant, Robert E. Lee and Stonewall Jackson. We have medical heroes of the same calibre. We have a heritage just as valuable as that which inspires our patriotic impulses. The work of Pasteur,

Jenner, and Walter Reed are just as valuable contributions to mankind as those of any man who signed the Declaration of Independence or responded to the Emancipation Proclamation.

We need this quality which, for lack of a better name, I shall call medical patriotism. It will make us more loyal to our profession and less tolerant of the few within our ranks who are inclined to defile the flag under which men have fought and died for humanity. It will inspire a new love for our art, a love which will fill us with pride and command the respect and admiration which our fathers enjoyed.

THE METHODS OF TRANSFUSING BLOOD*

JOHN E. BOYD, M.D., and
GEORGE W. RICHARDSON, M.D.,
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The first real transfusion, says Dr. Kolmer, was done in England, by Lohr, 1660-65. He transfused blood from one dog to another by means of a goose quill, and the dogs lived. Sir Christopher Wren and Archibald did theirs two years later on a debauched man from the street. By means of a funnel and cannula they allowed 12 ounces of sheep's blood to run into the man's vein. Transfusion, however, did not become an established procedure until the latter part of the nineteenth century, at which time it was accomplished by both the direct and the indirect method. In the direct method, the artery of the donor was anastomosed to the vein of the recipient either by direct suture or the use of a cannula. When blood was withdrawn from the vein of the donor by means of a needle and a syringe, and after being defibrinated, was injected into the vein of the recipient, the procedure was called the indirect method.

In 1905, Carrel developed his technic for simple end to end suture of blood vessels and this became the basis for all future endeavor in the field of blood transfusion. The technical difficulties, however, of anastomosing one blood vessel to another by means of sutures, or of bringing two vessels together by means of tubes or other devices so that the blood would flow in a continuous stream demanded a skill possessed by only a few master surgeons, and all too often these would meet with failure. The best surgeons from everywhere made special trips to witness Dr. Alexis Carrel perform his operation of blood vessel anastomosis. Having observed this wizard in action, they went away

dazed with wonder at the performance, but depressed in spirit as to its probable good to humanity in general. The final test of any surgical procedure is a simplicity sufficient to bring that procedure within reach of the average surgical skill. When one considers how delicate the blood vessel wall is; the necessity of having to use a stream of salt solution continuously in the wound to prevent clotting, and liquid vaseline to prevent drying; the care to be exercised against injuring the intima of the vessel and yet the necessity of ridding that vessel of all its fibrin; the demand for absolute control of bleeding; the need of special silk, such as 00000, made by Belding Bros. of New York, also a needle only 1 inch long; the necessity of discarding the rubber gloves and anointing the hands with vaseline when the actual suture is reached; one gets some meagre idea of the technical difficulties that had to be overcome in the direct suture of blood vessels.

Dr. George W. Crile of Cleveland devised the first clinically successful instrument for the anastomosis of blood vessels and advanced thereby the general usefulness of the procedure. He used a cannula with a handle—made in different sizes. The vessels to be anastomosed were exposed, a suitable sized cannula selected, and the vein pulled through the handle end of the tube by means of a single fine suture inserted into its cut edge, the needle being left on the suture. The handle of the cannula was seized tightly with a hemostat, three mosquito forceps snapped equidistantly on the end of the cut vein and the vein cuffed back over the cannula, tying it in place nearest the handle with a fine linen thread. The cuffed part was covered with sterile vaseline, being careful not to get any into the open end of the vein. The artery was then slipped over the cuff by the use also of three mosquito forceps, and tied in place with another linen suture, to complete the process. At the completion of the transfusion, the cannula was removed and both the artery and the vein were ligated.

Dr. Elsberg of New York developed an ingenious device built on the principle of a monkey wrench, which could be enlarged or narrowed to any size by means of a screw at its end. It had the advantage of one cannula for all sizes of vessels; the cannula went around the vessel; no ligation of the cuffed vessel was required; the cannula acted as a hemostatic clamp; the vein need simply be exposed, not dissected out and cut; and to allow the blood to flow, it was necessary only to unscrew the cannula.

*Second article in a series of three.

Dr. Bernheim worked out a two-pieced affair, two hollow tubes, each 4 cm. long, bulbous at one end, and beveled to facilitate entrance into the vessel; the other end was tubular and fitted for invagination with each other. With two pieces, one to go into the donor's artery, and the other into the recipient's vein, two crews could work at the same time, or if desired, the donor could be prepared in a separate room. When everything was ready, the two halves of the tube were invaginated.

As ingenious as were the different instruments devised for the direct transfusion of blood, the technical difficulties remained unchanged. B. F. McGrath developed a rather ingenious idea for transfusion by the indirect method—a rubber bulb fitted with double tips for insertion into the vessels. The bulb was filled with salt solution and the tips connected, one with the vessel of the donor and the other with the recipient. While compressing the donor's vessel the salt solution was expressed from the bulb; the pressure was transferred now from the donor's to the recipient's vessel and the bulb allowed to fill with the donor's blood. A repetition of this procedure carried on the transfusion. This method also sacrificed either an artery or a vein of the donor, and exposed him to considerable risk. Curtis and David overcame the last objection by using a glass bulb, paraffin coated, to prevent clotting, and connected with a needle for insertion into the vein. This idea was improved upon by Kimpton and Brown and met with much popularity. The greatest objection to this was the extreme difficulty of having the bulb properly paraffined. In 1913 Lindeman improved a technic, which had been used first by von Zieszen in 1892, calling for syringes and cannulas. By employing a large number of syringes so as to keep them constantly washed by an assistant, he had a nearly perfect method.

All the indirect methods so far, except the paraffin-coated tube, required the transference of the blood in less than the normal coagulation time. It was soon realized that if the transfusion of blood was to become practical and useful, some way of simplifying the procedure would have to be devised. The tendency of blood to clot when outside its vessel was the one big difficulty to be overcome. A method, then, to prove satisfactory, must either provide against this clotting while the blood was retained out of its vessel, or it must provide for the easy transference of blood from one person to another more rapidly than its normal clotting time. Human ingenuity has met both demands. By means of the citrate method, it is

possible to withdraw any desired quantity of blood from one person and convey it in a fluid state to another person miles away. With the multiple stopcock and good syringes, the operator can easily keep the blood moving from one person to another faster than its normal clotting time. There are still some minor difficulties with each method, but the procedure is now simple enough to bring this life-saving measure to people everywhere. In 1914 and 1915 Hustin, Agote, Weil, Lewisohn, Rueck, and others published articles dealing with the transfusion of citrated blood. When Lewisohn determined the proper dosage of sodium citrate which could be safely used, the "*Citrate Method*" united four surgical advantages—facility, rapidity, efficacy, and security.

The greatest impetus to the development of methods of certainty for the easy transfusion of blood has been lent by the introduction of the multiple way stopcock. At the present time all procedures can be grouped under two headings, (1) the modified blood method, and (2) the unmodified blood method. The unmodified, or whole blood method, can be subdivided into two groups—the indirect and the direct. The former is exemplified by Kimpton and Brown's paraffin-coated glass apparatus, the latter by the syringe-stopcock apparatus with which known quantities of blood can be given without undue danger of the introduction of large quantities of air. Dr. L. J. Unger published his article "A New Method of Syringe Transfusion" in the *Journal of the American Medical Association*, 64: 582-584 (Feb. 13, 1915). Briefly, his instrument consisted of a four-way stopcock providing for the flow of a small amount of saline solution through that part of the apparatus not in use. This new method did away with the practice of using the scalpel to expose the vessel. The danger of infection and injury of the vein in both the donor and recipient was also avoided. A donor can be used over and over again.

In 1926, Dr. Brines modified the Unger apparatus and claims for his improvement the following advantages: the practice of pouring ether on the syringe, which was objectionable to many patients, was stopped; saline solution is no longer given along with the blood, but used only for the purpose of testing the recipient's needle before beginning the transfusion. The third change, he claims, is probably the most important. The apparatus was formerly provided with attachments for two syringes, one a 20 c.c. Record syringe for the blood, and the other a 50 c.c. metal

syringe for the saline solution. "In our model," he says, "the adapter for the metal saline solution syringe has been replaced by an attachment for a Record syringe, thus providing the operator and his assistant each with a blood syringe operated at the same time but working in an opposite manner to each other; *i. e.*, when one syringe is being filled the other is being emptied and vice versa. This is made possible by the stopcock being so constructed that when the operator's syringe is in communication with one side of the apparatus, the assistant's syringe is in communication with the other." If an assistant is not available one side can be plugged and the transfusion done with the use of only one syringe. In 1928, Brines stated that his apparatus had several minor disadvantages which led him to investigate others on the market without finding one he considered an improvement. His claim for his apparatus at that time was that the blood is given without being modified in any way, the small amount of saline solution being used at first only as a test of the needle being in the recipient's vein; it is small, light and consists of only two parts; lubrication of the moving parts or paraffin coating is unnecessary; the veins are entered by needles; a canvas roll is made to hold every piece of equipment, so that it can be cleaned immediately after using, put in the roll and autoclaved at 5 lbs. pressure for use when needed again.

In addition to the Unger apparatus and Dr. Brines' modification of same, there are, at present, on the market two other syringe-stopcock instruments which enjoy a large following—the Scannell and the Jayne. My personal observation of the work of my associate, Dr. George Richardson, leads me to concur with him in his preference for the Jayne apparatus. Here are some of the advantages noted by us: it is absolutely foolproof and cannot be assembled incorrectly; it automatically protects against reversing the current of blood; it does not require the carrying of any saline solution to the recipient; it is much less subject to blood clotting than the other instruments; no assistant is needed for the manipulation; the taking of blood from the donor with one syringe while giving blood to the recipient with the other syringe is absolutely timed and mechanically done; the danger of air leakage is reduced to a minimum. The only complaint is the prohibitive cost. No matter what type of apparatus is being used, when the transfusion is completed the apparatus should receive the personal care of the operator or his regular assistant. Practically no

nurse, and few doctors, appreciate the need for absolute cleanliness and dryness in the care of these instruments. The presence of even a microscopical deposit of blood or rust in the path of the blood will materially interfere with the success of the next transfusion. New rubber tubing must be used for each operation. Needles should be of a proper calibre, furnished with a short beveled point, kept immaculately clean and dry, and the point made razor sharp for each transfusion. Dr. Richardson states: "A needle that carries an obturator of the same bevel and is securely locked in position is the most practical because it does not tend to tear the vein. I have been much chagrined on several occasions by this annoying accident and in each instance I was using needles furnished with either the Unger or Scannell apparatus." At the time of the transfusion, there should be ready and sterile as many extra syringes as the instrument requires for its use. Of course, further improvements will follow, but the successful, practical, and universal use of blood transfusion is now available in all parts of the world through the mechanical simplicity of the present-day apparatus.

THEORY AND APPLICATION OF THE SCHILLING BLOOD PICTURE*

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The excellent treatise of Schilling, translated into English by Gradwohl, has been generally accepted to supplant blood counting by many hospitals because of the greater amount of information gained by the Schilling routine. Schilling renames certain blood cells and divides all abnormal blood pictures into either degenerative or regenerative phases for either or both red and white cells.

The thesis is quite technical, so I will endeavor to sift only such parts as may be of interest to us as clinicians. A slide is more informative than the count, for with the count alone, the most valuable information is not observed.

All direct changes in circulating blood cells must be due to degeneration with resulting reduction unless regeneration corrects the end result. All other abnormal blood pictures are due to the entrance of new cells into the circulation. In turn, these may be destroyed rapidly or may increase the total number beyond the average count. The

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destructive state is known as the "degenerative phase" and the reconstructive process as the "regenerative phase."

Progressing from generalities, one may expect to find $4\frac{1}{2}$ to 5 million erythrocytes to the cmm. normally, the individual cells to appear as non-nucleated biconcave disks of about even size, shape and staining quality with probably never over 1% of juvenile forms and that the duration of life of each cell should be between 20 and 30 days. Degeneration appears through distortion and destruction.

The regenerative phase is divided into five classes for description:

(1) Short irritation blood picture—observed following hemorrhage with resulting flooding of the blood stream with reserve cells.

(2) Latent regeneration with the bone marrow in a state of beginning hypertrophy.

(3) Simple regeneration.

(4) Increased regeneration with considerable increase in the size of young forms.

(5) Hyperregeneration with general irregularity of the erythrocytes and the appearance of "blast" cells and degenerative forms indicating failure of normal regeneration. In general, the red blood picture and the total number of erythrocytes are the result of the varying cooperation between the central and peripheral degeneration and the central regeneration depending on the time interval.

The white blood picture includes the total count, relative percentage count and the nuclear shift. Normally there are about $7\frac{1}{2}$ thousand white cells to the cmm., composed of granulocytes, lymphocytes and monocytes. The granulocytes are classified as basophilic, eosinophilic and neutrophilic leukocytes of which the latter is further subdivided into segmented nuclears, heretofore called polynuclear neutrophiles, stab forms with "U," "V" or "T" shaped nuclei, juvenile forms and abnormally myelocytes. All sizes of lymphocytes are usually reported under one head. The monocytes include the mononuclear leukocytes and the "transitionals." The normal nuclear shift index is 4 other granulocytes to 64 segmented nuclears.

While most infectious shifts are mixed forms, the degenerative nuclear shift is recorded by a relative increase of stab nuclears often showing degeneration and without the presence of young forms. On the other hand, the regenerative shift shows an absolute increase in neutrophiles depending on the excess of juvenile forms extending

to the inclusion of the myelocytes in the blood picture. However, cell consumption may exceed cell production, causing a lowered total count with further advancing shift.

During infection with a favorable prognosis the various stages are described as:

(1) Neutrophilic battle phase showing a neutrophilia with severe regenerative shift, lymphopenia, eosinopenia with a monopenia at the peak of the infectious curve.

(2) Monocyte defense phase, presenting receding neutrophilia and shift, reappearance of eosinophiles, rising number of lymphocytes and a high number of monocytes.

(3) Lymphatic cure phase with lymphocytosis, eosinophilia and no shift.

In summary, Schilling states, "The retrogression of an existing shift and of the neutrophilia or neutropenia approaching the normal count, with reappearance of the eosinophiles, apparently is to be regarded as always favorable. On the contrary, the shift with more extensive deviation from the normal count and differential count with decrease of the eosinophiles down to total disappearance is always unfavorable."

For examples, I will review two quoted cases resembling acute appendicitis:

Case 1. Young male admitted 36 hours after the onset of severe abdominal symptoms with marked abdominal tension and fever to 39° C.

Case 2. Male child, 11 years old. Vomited once during the night. Rectal temperature 38.3° C. No other complaints. The mother was suffering from influenza at the time with little care against exposing the boy to her infection. Slight rigidity was noted over the lower right abdominal quadrant.

THE HEMOGRAMS

Total count:	Baso.	Eosino.:	Myelo.	Juven.	Stabs	Seg.:	Lymph.	Monon.
(1) 10,000	0	1	0	0	12	63	16	8
(2) 10,000	0	0	2	10	15	43	22	8

In case 1. Slight shift to stabs, hypoeosinophilia with lymphocytes moderately diminished. Slight phase of neutrophilic irritation. Total neutrophiles 75%. Operated upon against the pathologist's judgment confirming his diagnosis of a benign appendicitis not requiring surgery. Hysteria caused the major symptoms.

In case 2. Neutrophilic leukocytosis with high regenerative shift. No eosinophiles. Total neutrophilic granulocytes 70. Operation proved the condition to be an appendicitis with beginning pus formation.

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H. MASON SMITH, M.D. Tampa

ADVISORY COMMITTEE TO WOMAN'S AUXILIARY

FREDERICK J. WAAS, M.D. Jacksonville
J. H. PIERPONT, M.D. Pensacola
J. E. TAYLOR, M.D. DeLand
J. S. McEWAN, M.D. Orlando
W. W. MASSEY, M.D. Quincy

LIABILITY INSURANCE

Much interest has been shown by members of our Association throughout the State in the group life insurance which was made available to members in good standing last October.

However, there are still many physicians eligible to this insurance who apparently do not fully appreciate the benefits to be derived from it. During the last year the number of damage suits for every sort of claim has increased enormously throughout the entire United States. Suits against physicians for alleged malpractice have also shared in this increase.

Any practicing physician is liable at any time to become involved in a damage suit which may not only entail a great financial loss but may also greatly impair his professional reputation in his community. The policy which our State Association carries has been drawn up especially for us,

in accordance with certain requirements of our officers and executive committee. It gives all necessary protection against financial loss. Moreover, its terms are such that irresponsible parties are much less likely to bring unjustified suits.

Settling damage suits out of court by making certain payments to the plaintiff is frequently less expensive to the insurance company than fighting the suit. But such procedures naturally encourage bringing unwarranted suits.

In our policy settlement out of court can only be made when the insured and a majority of a committee of five other policy holders (members of our State Association), all agree with such a settlement. This clause alone is a great protection as on account of it our policy holders will be much less likely to suit.

The secretaries of county societies have the list of the agents to whom applications should be made for policies.

STATE NEWS ITEMS

The medical staff of the U. S. Veteran's Hospital at Lake City acted as host to the Roentgenological Society on December 4th at its semi-annual meeting. The principal matter of business was the selection of Dr. J. A. Pines of Orlando to act as secretary at the coming annual session on Monday, May 11th, preceding the Fifty-eighth Annual Convention of the Florida Medical Association at Orlando. Many interesting films of rare and unusual cases were exhibited. The meeting was informal in nature with round table discussions both interesting and enjoyable. It is time now for every physician who is doing X-ray work to prepare interesting films for the spring meeting.

* * *

Dr. Rosalie S. Morton announces the removal of her office and residence from New York City to Winter Park, Florida. Dr. Morton recently returned from quite an extended trip abroad, visiting Iceland, Finland, Yugoslavia and Albania.

* * *

Dr. Max Ghertler of Miami is now located at 1715 S. W. 11th Street. Dr. Ghertler's address formerly was 820 2nd Street, Miami Beach.

* * *

Dr. E. J. Hall of Miami was in New York City part of September visiting clinics.

Dr. Louie Limbaugh of Jacksonville was the principal speaker at the Jacksonville Rotary Club recently and Rotarian Limbaugh selected as his subject, "How to Keep Fit."

* * *

Dr. and Mrs. M. A. Lischkoff of Pensacola motored to New Orleans to spend a week visiting relatives and friends. They were among the Tulane rooters at the Tulane-L. S. U. football game on Thanksgiving Day.

* * *

Dr. Harold E. Miller, formerly of Savannah Hospital, Savannah, Georgia, is now located in New Smyrna where he is associated with his father, Dr. B. E. Miller.

* * *

Dr. and Mrs. C. D. Christ have returned to Orlando from a trip to Cuba, where Dr. Christ attended the Seaboard Railway Surgeons' Convention.

* * *

Dr. F. A. Brink of Jacksonville was recently presented with a twenty-year service medal from the State Board of Health.

* * *

Dr. R. H. Williams of Eustis and Miss Marian McFetridge of Tarentum, Pennsylvania, and Eustis, were married in Tarentum recently. Dr. Williams is associated with Dr. C. M. Tyre of Eustis.

* * *

At the regular meeting of the Escambia County Medical Society, held December 9th, the following officers were elected:

President—Dr. R. G. Nobles, Pensacola.

Vice-President—Dr. J. B. Turner, Bagdad.

Secretary-Treasurer—Dr. J. M. Hoffman, Pensacola.

Board of Censors:

Dr. A. M. Ames for one year.

Dr. H. L. Bryans for two years.

Dr. C. C. Webb for three years.

* * *

Dr. Allan Jones, formerly of Holopaw, is now located at the Orange Clinic, in Orlando.

Dr. A. C. Colson of Claxton, Georgia, has located in Umatilla, where he will practice his profession.

* * *

The Pasco-Hernando-Citrus County Medical Society met with Dr. George R. Creekmore, Thursday evening, December 11th, at his home where a real turkey dinner was served by Mrs. Creekmore. Regular business was attended to and clinical cases reported. The following officers were elected:

President—Dr. Wm. S. Hancock, New Port Richey.

Vice-President—Dr. L. H. Dame, Inverness.

Second Vice-President—Dr. L. T. Furlow, Brooksville.

Secretary-Treasurer—Dr. George R. Creekmore, Brooksville.

Censors—Dr. A. B. Cannon, Lacoochee (Pasco County); Dr. A. C. Coogler, Brooksville (Hernando County); Dr. P. J. Hudson, Crystal River (Citrus County).

Representative to House of Delegates, State Convention—Dr. Geo. A. Dame, Inverness.

Alternate—Dr. T. F. Jackson, Dade City.

* * *

Dr. Meredith Mallory of Orlando recently opened an office in the Exchange Building.

* * *

The United States Civil Service Commission announces the following-named open competitive examinations: Medical Officer, Associate Medical Officer, Assistant Medical Officer. (General Medicine and Surgery). Applications for the above-named positions will be rated as received by the U. S. Civil Service Commission at Washington, D. C., until June 30, 1931. These examinations are to fill vacancies in the Departmental Service, Veterans' Bureau, Public Health Service, Indian Service, Coast and Geodetic Survey, and Panama Canal Service.

* * *

Dr. and Mrs. Frank B. Enneis of Jacksonville announce the birth of a daughter, December 8, 1930.

* * *

At a recent meeting of the Broward County Medical Society, the following officers were elected for 1931:

President—Dr. Ralph Lingeman, Ft. Lauderdale.

Vice-President—Dr. O. C. Brown, Ft. Lauderdale.

Secretary-Treasurer—Dr. Anna Darrow, Ft. Lauderdale.

Representative, House of Delegates, State Convention—Dr. H. G. Peavy, Ft. Lauderdale.

* * *

Dr. Sylvan McElroy of Orlando recently enjoyed the waters of Havana, Cuba, and attended a meeting of the Seaboard Airline Railway Surgeons.

* * *

The Seminole County Medical Society met on the evening of December 12th, at the offices of the president, Dr. W. T. Langley, with every member present. Excellent papers were read, one on "Gastric Ulcer," by Dr. C. M. Mitchell of Sanford, and one on "Perinephritic Abscess," by Dr. J. N. Tolar of Sanford. These were instructive and were freely discussed by members present. The newly elected officers for 1931 are:

President—Dr. H. D. Smith, Sanford.

Vice-President—Dr. J. W. Martin, Oviedo.

Secretary-Treasurer—Dr. J. T. Denton, Sanford.

Councilor—Dr. S. Puleston, Sanford.

Delegate to the House of Delegates of the Florida Medical Association—Dr. G. S. Selman, Sanford.

Refreshments were served and all enjoyed a pleasant evening.

* * *

The following recently appeared in one of our daily papers:

"Surgeon General Hugh S. Cumming of the United States Public Health Service today informed Senator Duncan U. Fletcher that contrary to rumors to the effect that the Marine Hospital at Key West will be placed on an inoperative basis, it will be enlarged in the near future at an estimated cost of \$25,000, funds for which were made available during the last session of Congress, and that, therefore, accommodations for a larger number of war veterans will be available."

* * *

The Columbia County Medical Society met recently at Lake City and the following officers were re-elected for 1931:

President—Dr. L. M. Anderson, Lake City.

Vice-President—Dr. R. B. Harkness, Lake City.

Secretary-Treasurer—Dr. T. H. Bates, Lake City.

* * *

Dr. John S. McEwan of Orlando has been in the Wilmer Eye Clinic, Baltimore, for the past two months, with an infected eye, the result of an assault by a sea bass.

Dr. W. C. Williams, Jr., of Delray Beach, recently entered the United States Veterans' Bureau Service and will be stationed at Chicago.

* * *

The Central Florida Medical Society held its semi-annual meeting at Gainesville, October 28th. There were about fifty members present. Dr. J. L. Chalker of Ocala, president, presided. Following the dinner and the address of welcome which was given by Professor Percy Black of the University of Florida, the ladies adjourned and spent the evening playing bridge. The address of welcome dealt with the history of medicine and was enjoyed by everyone. Dr. Edward Jelks of Jacksonville read a very interesting paper with lantern slide demonstration on "Intestinal Obstruction." Dr. W. McL. Shaw of Jacksonville, assisted Dr. Jelks with the slide demonstration. Dr. T. Byron King of Gainesville gave a carefully prepared paper on "The Most Common Uses of Radium and Its Application." Dr. Ralph Greene of Jacksonville gave an excellent talk on "The Viewpoint of the Neurologist in the Practice of Medicine." A general discussion of all papers followed. The next meeting is to be held at Leesburg.

* * *

At a recent meeting of the Lake County Medical Society, the following officers were elected for the ensuing year:

President—Dr. H. G. Holland, Leesburg.
Vice-President—Dr. A. S. Hawkins, Clermont.
Secretary-Treasurer—Dr. W. L. Ashton, Umatilla.

* * *

Dr. L. L. Andrews of Orlando recently moved his office to the Orange Clinic, 18 Lucerne Circle.

* * *

At a recent meeting of the Lee County Medical Society, the following officers were elected for 1931:

President—Dr. Robley D. Newton, Ft. Myers.
Vice-President—Dr. George Stone, Ft. Myers.
Secretary-Treasurer—Dr. H. Quillian Jones, Ft. Myers.
Censors—One year: Dr. Ernest Bostleman, Ft. Myers. Two years: Dr. J. William Jones, Ft. Myers. Three years: Dr. Guy Longbrake, Ft. Myers.
Representative, House of Delegates, State Convention—Dr. H. Quillian Jones, Ft. Myers.
Alternate—Dr. W. H. Grace, Ft. Myers.

Dr. Ernest B. Milam was recently elected district trustee to represent the Jacksonville Kiwanis Club.

* * *

The regular meeting of the Alachua County Medical Society was held December 11th, at the Primrose Grill, Gainesville, during luncheon hour. Films were shown at the Florida Theatre on "Traumatic Surgery of the Extremities." Dr. E. H. Andrews of Gainesville gave a very interesting paper on the diagnosis and treatment of "Congenital Syphilis." This being the last meeting of the year, the regular annual election of officers ensued, the following being elected:

President—Dr. T. Byron King, Gainesville.
First Vice-President—Dr. G. M. Floyd, Hawthorne.
Second Vice-President—Dr. E. H. Andrews, Gainesville.
Secretary-Treasurer—Dr. John E. Maines, Jr., Gainesville.
Delegates to House of Delegates, State Convention—Dr. G. C. Tillman and Dr. T. Byron King, Gainesville.
Alternates—Dr. E. H. Andrews, Gainesville, and Dr. W. C. Young, Jr., Waldo.
Censor—Dr. John E. Maines, Sr.

* * *

Dr. W. C. Page of Cocoa was recently elected senior warden of the Brevard Lodge, No. 113, Free and Accepted Masons.

* * *

Doctors who are interested in meetings of medical fraternities or alumni of medical schools at the Fifty-Eighth Annual Convention in Orlando next May are requested to communicate with Dr. G. H. Edwards, chairman of the general committee, who will arrange for suitable times and places for such meetings. Dr. Edwards' address is care Orlando Clinic, Orlando.

* * *

Excerpt from *Florida Times-Union*:

New York, Dec. 3.—WNS—Dr. A. Edward Corthell, alias Frank Howard, was being held at St. Louis Police Headquarters today pending the arrival of detectives from New York, who will bring him back here for questioning in the Grace Budd kidnapping, now a mystery for two years. Corthell, who says he is a Harvard graduate but was stopped from practicing because of an illegal operation, has persistently denied that he is the Frank Howard wanted in the Budd case, but police of St. Louis are holding him because of the

finger print notices sent throughout the country soon after the kidnapping. * * * Mrs. Delia Budd, mother of the missing girl, was interviewed by detectives today and will attempt to identify Corthell when he arrives.

St. Petersburg, Dec. 3.—(AP)—Dr. A. Edward Corthell, under arrest in St. Louis, was a former resident of this city. Dr. Corthell was convicted of forgeries here in 1920 and sent to the Florida State Prison Farm. He escaped from the farm in 1922 and was recaptured in 1924 at Houston, Texas. He had escaped before that time and was captured in Pittsburgh. At the time of his second capture he told detectives he lived an easy life by forging checks. His career since being brought back to prison in 1924 was not learned.

* * *

The State Board of Medical Examiners report that thirty-nine physicians out of forty-four applicants taking the recent examination were successful in obtaining the required general average and have been licensed to practice medicine in Florida. The names of the thirty-nine successful physicians are as follows:

Drs. Clifford G. Blich, Raiford, Fla.; Alan DeWitt Brown, Jacksonville, Fla.; Van Montague Browne, Miami, Fla.; Antonio Valentino Camera, Tampa, Fla.; Alva Thomas Cobb, Jr., Chattahoochee, Fla.; James P. Daniels, Pensacola, Fla.; Wm. H. Daniels, Baltimore, Maryland; J. E. Dees, Miami, Fla.; Julio DePoo, Tampa, Fla.; Ernest Donald, Miami, Fla.; George P. Dunham, St. Petersburg, Fla.; George W. Elarbee, Daisy, Ga.; Wm. Polk Farber, Atlanta, Ga.; Enoch Raymond Fenton, Miami, Fla.; W. L. Fitzgerald, Trussville, Ala.; Alva J. Floyd, Fair Bluff, N. C.; Robert H. Fraser, Battle Creek, Michigan; Robert B. Gamble, Meadville, Pa.; Juan M. Garcia Gutierrez, Tampa, Fla.; R. G. Hand, Holopaw, Fla.; Carroll B. Jones, Gainesville, Fla.; John Harvey Kellogg, Miami Springs, Fla.; William Walter King, Milnor, N. Dak.; J. F. LaDuron, Muncie, Ind.; Wilson Lancaster, Wahpeton, N. Dak.; Robert Lawrence Mason, Roanoke, Va.; George E. May, Waban, Mass.; Richard C. Norton, Miami, Fla.; LeRoy Henry Oetjen, Augusta, Ga.; W. Grady Page, Dothan, Ala.; James C. Robertson, Chattahoochee, Fla.; Guillermo Roig, Tampa, Fla.; Chas. Leon Roles, Camilla, Ga.; Clyde Francis Smith, Wildwood, N. J.; Joseph Salvatore Spoto, Tampa, Fla.; Maximilian Stern, DeLand, Fla.; Cyrus J. Strong,

Miami, Fla.; Russell Thomas, Atlanta, Ga.; and W. S. Zarick, Indianapolis, Ind.

Only four of the thirty-nine physicians are native Floridians, four from Cuba, seven from Georgia and two from Canada; the others were distributed, about equally, from the various states.

* * *

Dr. Jack Fox, of Ft. Pierce, Florida, pled guilty, on November 26th, to practicing medicine without a license. He was sentenced to a jail sentence of one year.

* * *

Dr. F. K. Armstrong, of Ft. Myers, after a hard-fought trial in the Criminal Court of Lee County, lasting a week, was found guilty of manslaughter on December 13th. Dr. Armstrong was charged with having produced an abortion on a school teacher of Key West. After the death the County Solicitor ordered an autopsy performed, at which time it was found that the patients' uterus had been ruptured and four inches of the small intestine had been pulled down through the rent, producing strangulation, followed by gangrene of that part of the intestine incarcerated, resulting in her death twelve hours later.

It was the contention of the defense that the abortion had been started before the patient reached Dr. Armstrong and that the rupture in the uterus with the incarcerated intestine was caused by the undertaker's embalming trocar at the time of embalming the body.

The physicians called by the state to testify and who participated in the autopsy were Drs. H. Quillian Jones; W. H. Grace, of Ft. Myers; D. L. McSwain, of Arcadia; J. M. Grantham, Herbert R. Mills and W. M. Rowlett, of Tampa.

* * *

The State Board of Medical Examiners report that on November 22nd, Dr. Tyree C. Whitehurst was convicted, in the Criminal Court of Hillsborough County, for practicing medicine without a state license. He was sentenced by Judge Pette-way to serve a year and a day in the state prison at Raiford.

Dr. Whitehurst was acquitted on the charge of altering a public record in the office of the Clerk of the Circuit Court. He was charged with having erased the name of the late Dr. Sam Wilson and inserting his name instead.

* * *

Hugh S. Cumming, M.D., surgeon general, United States Public Health Service, was in-

stalled as president of the American Public Health Association during the recent convention at Fort Worth, Texas.

In 1893, Dr. Cumming received the degree of M.D. from the University of Virginia. The following year he entered the United States Public Health Service as assistant surgeon, and after successive promotions was named Surgeon General in 1920. During the World War he served as Public Health Service expert on duty with the Navy.

Dr. Cumming is a Fellow of the American College of Surgeons and also of the American College of Physicians. During 1929-30 he was president of the Southern Medical Association.

Dr. Cumming was one of the delegates to the international meeting which proposed the Pan-American Sanitary Code and is director of the Pan-American Sanitary Bureau. He is a member, and was formerly vice-president, of the Health Section of the League of Nations and is also a representative of the Office Internationale d'Hygiene Publique on the League of Nations Committee.

* * *

The American Board of Obstetrics and Gynecology, composed of nine members and examiners, elected by The American Association of Obstetricians, Gynecologists, and Abdominal Surgeons, The American Gynecological Society, and the Section on Obstetrics, Gynecology, and Abdominal Surgery of The American Medical Association, was formally organized in Niagara Falls, September 16, 1930. The function of the Board is to grant certificates indicating proficiency and specialization in obstetrics or gynecology, or both, to those who comply with its requirements.

COMING EXAMINATIONS FOR CERTIFICATION

The written examination must be taken by all applicants classified in Group 3 (see booklet), and will be held on Saturday, March 14, 1931, at 2 p. m. in the following cities:

New York City	Ann Arbor, Mich.
Chicago	Baltimore, Md.
Philadelphia	Raleigh, N. Carolina
Toronto, Canada	Atlanta, Ga.
Indianapolis, Ind.	Cincinnati, O.
Portland, Ore.	San Francisco, Cal.
Rochester, Minn.	Grand Forks, N. Dakota
Iowa City, Ia.	Denver, Colo.
St. Louis, Mo.	Galveston, Texas
Boston, Mass.	

For further information address the Secretary, 1015 Highland Bldg., Pittsburgh, Pa.

* * *

The Southeastern Surgical Congress convenes in Second Annual Assembly in Atlanta, Biltmore Hotel, March 9th and 10th, 1931. The preliminary program contains the names of a number of distinguished medical and surgical specialists who will present papers before the Society.

JOHN BROOKS LEFFINGWELL

Dr. John Brooks Leffingwell, 76, pioneer physician of Bradenton, died at his home on the waterfront at 209 North Sixteenth Street, November 19, 1930, following a long illness. Dr. Leffingwell was born in Kirkwood, Missouri, November 4, 1854, and received his education at the Missouri State University at Columbia, and graduated in 1880 from the St. Louis Medical College, now the Medical Department of Washington University. He came to Bradenton in 1881 where he practiced his profession until two years ago when his health failed. During his nearly half a century in Bradenton, Dr. Leffingwell was always active in everything that tended to the upbuilding of the city. When Bradenton was incorporated in 1903, Dr. Leffingwell was a member of the first city council. He later became postmaster and held this office for 20 years. For a number of years, he was president of the Manatee County Medical Society. He was a charter member of the local Board of Trade, now known as the Chamber of Commerce and was honored by that organization a year ago by being made a life member. Dr. Leffingwell was a vestryman and warden of Christ Episcopal Church, a Royal Arch Mason, a charter member of the Knights of Pythias and was also affiliated with the Independent Order of Odd Fellows and the Woodmen of the World. He is survived by his widow, two sons, Brooks Leffingwell, Bradenton, and John Bernard Leffingwell, Nueva Gerona, Isle of Pines, Cuba; a sister, Mrs. J. J. Fogarty of Tampa, and several nieces and a nephew. Dr. Leffingwell was a man of sterling worth and positive convictions, always managing to retain the friendship and esteem of those holding different opinions from his. After the death of Dr. Pelot he became dean of the medical fraternity in that section and his death is a real community loss.

THE WOMAN'S AUXILIARY PAGE

WOMAN'S AUXILIARY TO THE FLORIDA MEDICAL ASSOCIATION, INC.

State Editor
MRS. EDWARD JELKS,
2244 St. Johns Avenue
Jacksonville

OFFICERS

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In last month's Journal, we promised to give this month a detailed report of the meeting of the Auxiliary to the Southern Medical Association, but a letter today from Mrs. Brawner, past President, informs us that the report of the Louisville meeting is yet in the hands of the printers; however we are able to give a list of the newly elected officers which is as follows:

Officers, Woman's Auxiliary to the Southern Medical Association, 1930-1931:

President—Mrs. S. A. Collom, 621 Main Street, Texarkana, Texas.

President-elect—Mrs. Chas. E. Oates, Scenic Road, North Little Rock, Ark.

First Vice-President—Mrs. Geo. Hendon, 615 Brown Bldg., Louisville, Ky.

Second Vice-President—Mrs. M. C. Lewis, Nashville, Tenn.

Recording Secretary—Mrs. S. A. Collom, Jr., 621 Main Street, Texarkana, Texas.

Treasurer—Mrs. Southgate Leigh, 526 Shirley Ave., Norfolk, Va.

Historian—Mrs. Augustus Street, Cowan Place, Vicksburg, Miss.

Parliamentarian—Mrs. Edward Jelks, 2244 St. Johns Ave., Jacksonville, Fla.

At the Executive Board meeting of the Auxiliary to the S. M. A., Mrs. Collom announced that the new work for this coming year would be that of preserving and passing on the history of the lives of "Our Pioneer Heroes in Medicine." Mrs. Red, of Houston, Texas, the first president of the National Auxiliary, has written a book called "The Medicine Man in Texas," which is just off the press and is most interesting.

While we are on the subject of histories, and

speaking of Mrs. Red, this seems a most opportune time to give you her History of the Organizing of the Woman's Auxiliary to the A. M. A.

"The Woman's Auxiliary of the American Medical Association was organized in St. Louis, May 26, 1922. Mrs. Red, retiring president of the Woman's Auxiliary to the Texas State Medical Association, presented, through Dr. E. H. Cary of Dallas, a resolution from the Texas Auxiliary to the House of Delegates of the American Medical Association asking that a national auxiliary be formed. The resolution, as introduced by Mrs. Red, was as follows:

" 'The Woman's Auxiliary to the State Medical Association of Texas respectfully requests the approval of the American Medical Association, of a movement to organize a Woman's Auxiliary to the A. M. A., the object of which shall be "To extend the aims of the medical profession, through the wives of doctors, to the various women's organizations, which look to the advancement in health and education, to assist in entertainment at all medical conventions, to promote acquaintanceship among doctors' families so that closer friendships may exist!'" After an unanimous endorsement by the House of Delegates, a temporary organization was effected at a meeting held in the Statler Hotel on the morning of May 26, 1922, at which twenty-four doctors' wives were present, representing nine states. The following officers were elected:

President—Mrs. S. C. Red, Houston, Texas.

First Vice-President—Mrs. W. W. Graves, St. Louis, Mo.

Second Vice-President—Mrs. Southgate Leigh, Norfolk, Va.

Third Vice-President—Mrs. Ray L. Wilber, Palo Alto, Cal.

Corresponding Secretary—Mrs. H. L. D. Kirkhan, Houston, Texas.

Recording Secretary—Mrs. W. A. Wood, Waco, Texas.

Parliamentarian—Mrs. A. C. Scott, Temple, Texas.

Treasurer—Mrs. Walter Timme, New York, N. Y.

Immediately following the St. Louis meeting, letters were sent by Mrs. Red to the President of each State Medical Association in the United

States, asking that a leading doctor's wife be appointed to organize an auxiliary in each state. Many interesting answers were received, some responding most enthusiastically, others saying that no Auxiliary was needed in their state.

It was reported that South Dakota had enjoyed the activities of an auxiliary since 1914; that Maine had approved such an organization in 1918 and such an auxiliary had been started but had never been active; Montana had started an auxiliary in 1920, but this also had never been active. The Texas Auxiliary was organized in 1918, under the leadership of Mrs. W. A. Wood of Waco. Mrs. E. H. Cary of Dallas, served as President for the first two years.

After the St. Louis meeting, the first state to organize was Colorado under the leadership of Mrs. F. P. Gengenbach, of Denver and Mrs. Harry A. Smith, of Delta.

The first annual meeting of the Woman's Auxiliary of the American Medical Association was held in San Francisco, June, 1923. The Constitution was adopted at a meeting of the Executive Board held June 26, at the Plaza Hotel, the following states being represented: Texas, Colorado, South Carolina, Missouri, Utah, California, Alabama, Virginia, Minnesota, and Montana.

A general meeting was held June 28th, at the Fairmont Hotel. Seventeen states answered roll-call, ten having permanent organizations represented; two states, Mississippi and North Carolina, reporting full organization through the President, but having no delegates present. Inspiring talks were given by Dr. J. O. McReynolds, Dr. Southgate Leigh and Dr. Seale Harris.

Election of officers resulted as follows:

President—Mrs. S. C. Red, Houston, Texas.

President-elect—Mrs. J. Allison Hodges, Richmond, Va.

First Vice-President—Mrs. Southgate Leigh, Norfolk, Va.

Second Vice-President—Mrs. Robert E. Farr, Minneapolis, Minn.

Third Vice-President—Mrs. Seale Harris, Birmingham, Ala.

Fourth Vice-President—Mrs. F. P. Gengenbach, Denver, Colo.

Corresponding Secretary—Mrs. H. L. D. Kirkhan, Houston, Texas.

Recording Secretary—Mrs. W. A. Wood, Waco, Texas.

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Parliamentarian—Mrs. H. S. Smith, Delta, Colo.

Each Vice-President was assigned twelve states to assist in organization during the coming year.

The second annual meeting was held in Chicago at the Edgewater Beach Hotel, June 9th, 1924. The Executive Board meeting was well attended, reports showing much awakened interest. On the evening of June 11th, a dinner was given by the Auxiliary, Mrs. Williard Bartlett of St. Louis, serving as toastmistress. A welcoming address was given by the chairman of the entertainment committee, Mrs. Charles Spencer Williams, of Chicago. The President, Mrs. Red, gave her yearly report. The special guest was Dr. Geo. Vincent, President of the Rockefeller Institute of New York. He gave a splendid address on the civic duties of a doctor's wife. About two hundred attended this first party given by the Woman's Auxiliary.

At the general meeting held June 11th, twenty-six states answered roll-call, two having Auxiliaries not being represented. Many interesting reports were read. Talks of inspiration and encouragement were given by Dr. A. C. Scott of Texas and Mr. Cargill, Circulation Manager of "Hygeia." The Auxiliary was asked to assist with subscriptions for this official publication of the A. M. A. Much regret was expressed at the absence of the President-elect, Mrs. J. Allison Hodges, of Virginia, who was prevented from attending by death and illness in her family. The President was asked to again assume the duties of that office as the organization was still in the formative stage.

Up to this date the office of Treasurer had only been complimentary as no dues had been asked or received from any state or county auxiliary.

The third annual meeting was held in Atlantic City, May 28, 1925. The President, Mrs. Red, being absent on a world cruise, the Vice-President, Mrs. F. P. Gengenbach, presided at all meetings. At a dinner given by the Auxiliary, Dr. Arthur McCormick, of Kentucky, was the speaker. Mrs. Seale Harris gave a splendid address. Copies of this address were sent to many state auxiliaries. The Auxiliary was especially honored by the presence of the retiring President of the A. M. A., Dr. W. A. Pusey, and the incoming President, Dr. W. D. Haggard. Both gave talks of encouragement and advice."

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COUNTY SOCIETY	SECRETARY	MEETINGS				Dues Paid.
		Date	Time	Place	Luncheon?	
Alachua	J. E. Maines, Jr., M.D., Gainesville.	2nd Tuesday	12:00 Noon	White House	Yes.	
Bay	Don S. Fraser, M.D., Panama City.					
Brevard	I. K. Hicks, M.D., Melbourne.	3rd Tuesday		Varies		
Broward	Anna Darrow, M.D., Ft. Lauderdale.	2nd Tuesday	8:00 P.M.	Chamber of Com- merce	No.	
Columbia.....	T. H. Bates, M.D., Lake City.	1st Monday.	7:30 P.M.	Blanche Hotel		
Dade	E. N. McKenzie, M.D., Miami.	1st Friday	8:30 P.M.	Club Room, Huntington Bldg.	Occasionally.	
DeSoto-Hardee- Highlands ...	H. V. Weems, M.D., Sebring.		8:00 P.M.	Varies	Yes.	
Duval	Kenneth A. Morris, M.D., Jacksonville.	1st Tuesday	8:15 P.M.	Chamber of Com- merce Building	No.	
Escambia	J. M. Hoffman, M.D., Pensacola.	1st Tuesday	8:00 P.M.	Board of Health Building	No.	
Hamilton	J. R. Bruce, M.D., Jasper.					
Hillsboro	J. T. Cowart, M.D., Tampa.	1st and 3rd Tues- days	8:00 P.M.	Tampa Municipal Hospital	No.	
Jackson	C. H. Harrison, M.D., Cottondale.	2nd Tuesday	3:00 P.M.	Marianna	No.	
Lake	W. L. Ashton, M.D., Umatilla.	1st Thursday	12:30 P.M.	Eustis	Yes	
Lee	H. Quillian Jones, M.D., Ft. Myers.	3rd Friday	7:30 P.M.	Lee Memorial Hospital	No.	
Leon-Gadsden- Liberty- Wakulla- Jefferson	O. G. Kendrick, M.D., Tallahassee.	Quarterly	3:00 P.M.	Varies	Yes.	
Madison	Geo. O. Davis, M.D., Madison.					
Manatee	A. Q. English, M.D., Manatee.	1st and 3rd Tues. Oct. to May; 2nd Tues. May to Oct.	7:00 P.M.	Dixie Grande Hotel	Yes.	
Marion	Thos. H. Wallis, M.D., Ocala.	3rd Thursday	12:30 P.M.	Marion Hotel	Yes.	
Monroe	W. R. Warren, M.D., Key West.	1st Sunday	9:00 P.M.	Varies	Yes.	
Orange	J. R. Chappell, M.D., Orlando.	3rd Wednesday	8:30 P.M.	Varies	No.	
Palm Beach ...	R. G. Lewis, M.D., W. Palm Beach.	2nd Monday	8:00 P.M.	Court House	Yes.	
Pasco- Hernando- Citrus.....	Geo. R. Creekmore, M. D., Brooksville.	2nd Thursday	7:00 P.M.	Varies	Yes.	
Pinellas	O. O. Feaster, M.D., St. Petersburg.	Every other Friday	8:00 P.M.	500 Power & Light Bldg.	No.	
Polk	Herman Watson, M.D., Lakeland.	2nd Wednesday in Feb., Apr., June, Aug., Oct., Dec.	1:00 P.M.	Lakeland	Yes.	
Putnam	E. W. Warren, M.D., Palatka.	2nd Thursday	7:00 P.M.	James Hotel, Palatka	Yes.	
St. Johns	A. C. Walkup, M.D., St. Augustine.	3rd Tuesday	8:30 P.M.	Varies	Yes.	
St. Lucie-Okeech- bee-Indian River-Martin ..	C. L. Davis, M.D., Okeechobee.	3rd Thursday	8:00 P.M.	Varies	Yes.	
Sarasota	F. C. Metzger, M.D., Sarasota.	2nd Tuesday	8:30 P.M.	Varies	Occasionally.	
Seminole	J. T. Denton, M.D., Sanford.	2nd Friday	8:00 P.M.	City Hospital		
Sumter	W. E. Mitchell, M.D., Coleman.	2nd Tuesday		Varies	No.	
Suwannee	W. C. White, M.D., Live Oak.					
Taylor	R. J. Greene, M.D., Perry.	Last Thursday	12:15 P.M.	Eldorado Cafe	Yes.	
Volusia	J. Ralston Wells, M.D., Daytona Beach.	2nd Tuesday	7:30 P.M.	Varies	Yes.	
Walton- Okaloosa	A. G. Williams, M.D., Lakewood.	3rd Thursday	8:00 P.M.	Varies	Occasionally.	
Washington- Holmes	H. A. McClure, M.D., Chipley.					

NOTE—Secretaries: Please submit information to complete the above schedule.

TUBERCULOSIS ABSTRACTS

A REVIEW FOR PHYSICIANS

ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

THE literature on lung abscesses, dating back to Hippocrates' time, abounds in contradictions and discouragements. In most cases of lung abscess, the etiology is difficult to trace, the symptoms and physical signs are misleading, the prognosis is pessimistic, and the treatment is unsatisfactory. Surgical measures have not, in general, proved to be a boon. However, the results of 35 cases of non-tuberculous abscesses of all kinds, observed by H. I. Spector of St. Louis, warrant a more optimistic outlook and sustain the value of conservative, harmless, medical regimen. Abstracts of Dr. Spector's paper follow.

LUNG ABSCESSSES

Early literature emphasized pneumonia as the cause of lung abscesses. Only recently has it become recognized that lung abscesses are a rare sequel of lobar pneumonia, occasionally follow bronchopneumonia, and most often follow operations of the upper respiratory tract. Some observers believe that abscesses may be primary and may, in fact, be preceded by a primary stage of pneumonia.

ETIOLOGY

Whether the causative organisms gain entrance into the lung by aspiration or through the blood by means of an embolus is under dispute. Perhaps a combination of the two processes will explain certain obscure cases. Chronic infections in the upper respiratory tract and the retention in the lungs of certain anaerobes ordinarily found in

(Continued on page 340)

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Fig. 1.—Solitary lung abscess with fluid level in upper part of right upper lobe.

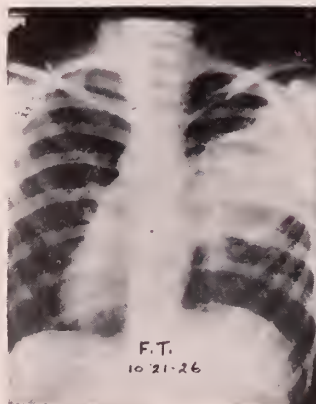
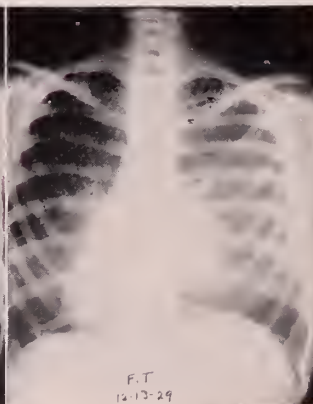
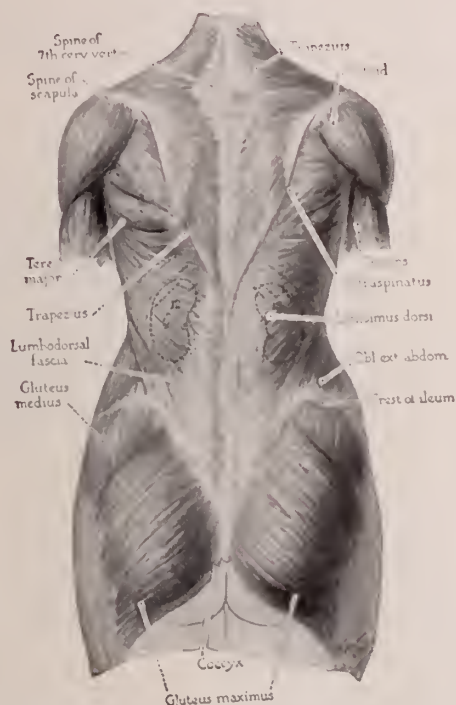


Fig. 2.—Same case about three years later. Evidence of abscess absent; patient in good health, attending school.



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the mouth play a role in etiology. Experimentally anything that tends to abolish the cough reflex in anesthesia, or to increase the cough after anesthesia, seems to favor the production of abscesses.

TYPES

Lung abscesses may be acute or chronic; single, bilateral, or multiple; and may be situated in the hilar region, in the center, or the periphery of the lung. Lower lobes seem to be more frequently involved than upper, and the right more frequently than the left lung.

SYMPTOMS

Obviously, a disease of such variable etiology and pathology will manifest a multiplicity of symptoms. Chills, pain in the chest, dry paroxysmal cough followed later by profuse expectoration of foul odor are common. A septic temperature, rapid pulse, and high leucocyte count are usually present. Night sweats, loss of weight, and hemoptysis are a part of the clinical course. Clubbing of the fingers is usually seen in chronic cases. Elastic tissue in the sputum is not common.

PHYSICAL SIGNS

The physical findings depend upon the location and size of the abscess and on whether or not rupture has occurred. Centrally placed abscesses present few signs; peripheral ones, if large enough, may give rise to scattered, fine, or medium rales. After rupture, signs of cavitation, such as bronchial breathing, medium and coarse rales, and whispering pectoriloquy may be elicited. Generally speaking, the symptoms are out of proportion to the physical changes, the most constant of which is dullness on percussion and a diminution of breath sounds.

A detailed history as to etiology and mode of onset is important. After rupture of the abscess, the diagnosis is relatively simple. Multiple abscesses too often remain unrecognized until after autopsy.

(Continued on page 342)

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The roentgenogram is indispensable. In the early stage, the abscess is frequently seen as an acute, irregular consolidation, not characteristic in appearance, and may resemble a pneumonic tuberculous consolidation, interlobar empyema, or a new growth. After rupture, if the cavity is partially filled with secretion, a fluid level with a rarefied area above may be seen. If completely filled, one cannot distinguish between the infiltration and the fluid. An extensive zone of congestion may surround the abscess.

PROGNOSIS

Early diagnosis offers a more favorable prognosis. The prognosis will depend upon the cause, the type, the location, and the duration of the abscess. Those following inhalation of foreign bodies have a good prognosis. Solitary abscesses offer more encouragement than multiple, and apical and hilar abscesses have a better outlook than central or peripheral ones; acute abscesses are more hopeful than the chronic. The character of the treatment, of course, definitely influences the prognosis.

TREATMENT

Until recently, surgery has occupied a prominent place in the treatment of lung abscess. The results obtained by medical treatment were disheartening; mortality ranging from 60% to 100% has been reported by good observers. More satisfactory results of medical treatment recently reported have stimulated a renewed interest, and the pendulum seems to be swinging toward conservatism; though radical surgery in modified form still occupies a prominent place. Bed rest, diet, and postural drainage are used by many surgeons as a preliminary measure to radical treatment. Artificial pneumothorax, vaccine, and drug therapy also have their advocates.

The author's treatment in 35 cases consisted of complete bed rest during the acute stage, postural drainage several times a day (frequency and length of time depending on the patient's tolerance), and a soft but nourishing diet. Patients

(Continued on page 344)



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were encouraged to expectorate. Pneumothorax was attempted if improvement did not take place within a reasonable length of time. Radical surgery was resorted to in one case in which pneumothorax had failed. Bronchoscopy, transfusions, and arsphenamine were used twice each in different cases and as a last measure in hopeless cases.

After subsidence of acute symptoms, the patients were discharged but continued treatment at home and reported for observation at the outpatient clinic. Prolonged bed rest was stressed. In fact, lung abscess cases are treated like active, and later quiescent, cases of tuberculosis, and patients are not permitted to return to work until evidences of pathologic changes can no longer be revealed.

With the exception of one patient who could not be traced, all of the cured patients have remained well. Four of the improved patients could not be found and these failed to cooperate.

An analysis of the results indicates that the prognosis is much better in solitary than in multiple abscesses, since 89.6% of the former were either improved or cured, while 100% of the latter had a fatal ending.

SUMMARY OF CONCLUSIONS

Among the conclusions are:

All acute lung abscesses are primarily medical, a contention supported not only by the results quoted but also by the statements of other authors that operation during the acute phase of abscess carries with it a mortality of from 65 to 70%.

Acute single long abscesses and some chronic abscesses are usually amenable to medical treatment alone.

Radical surgery is definitely indicated only in cases in which the patient does not get well after a reasonable period of conservative "management," in peripheral abscesses that do not drain well, in long standing chronic cases, or, occasionally, in multiple abscesses limited to one lobe.—*Lung Abscesses, II. I. Spector, Jour. of the A. M. A., Sept. 13, 1930.*

(This review secured by the Florida Public Health Association from the National Tuberculosis Association).

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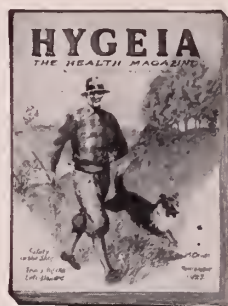
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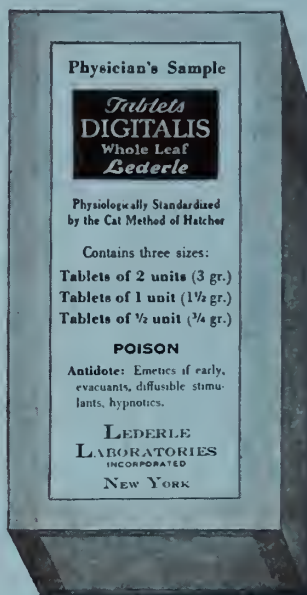
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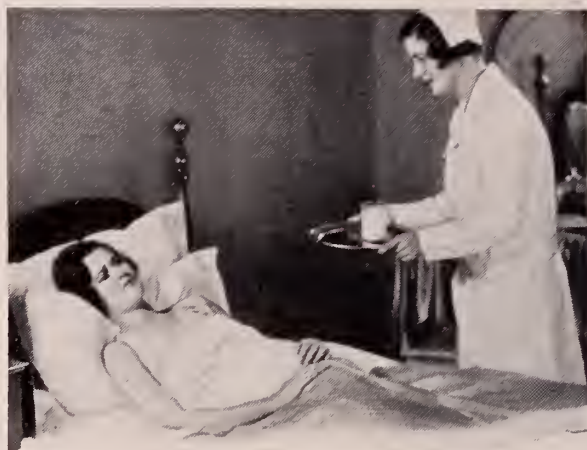
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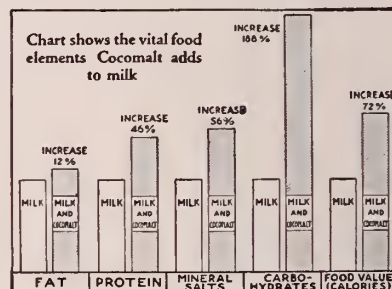
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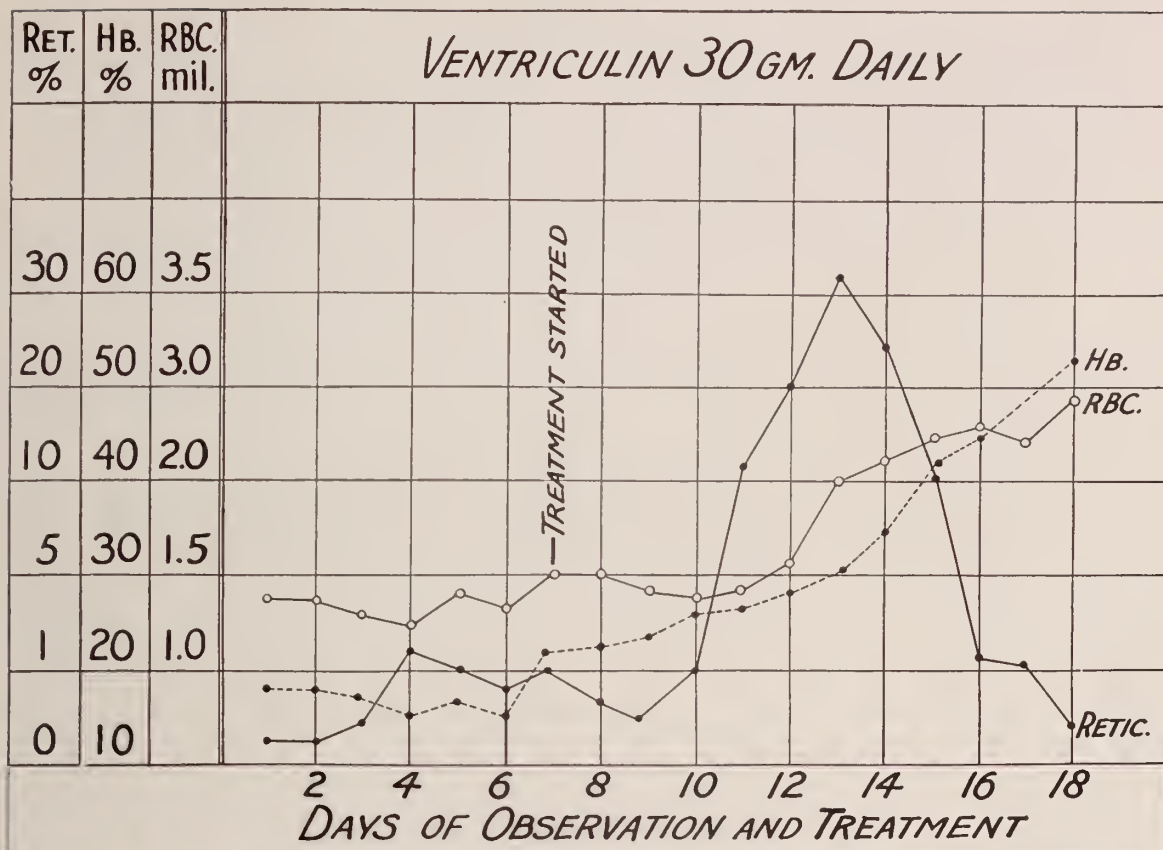
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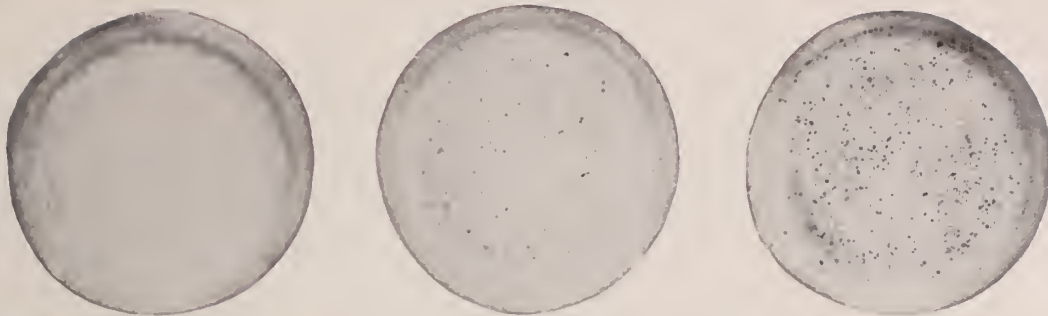
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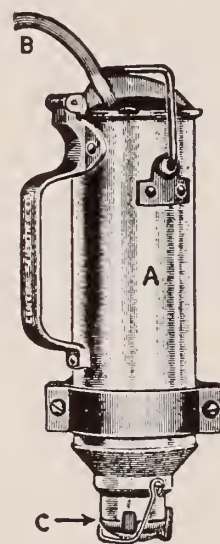
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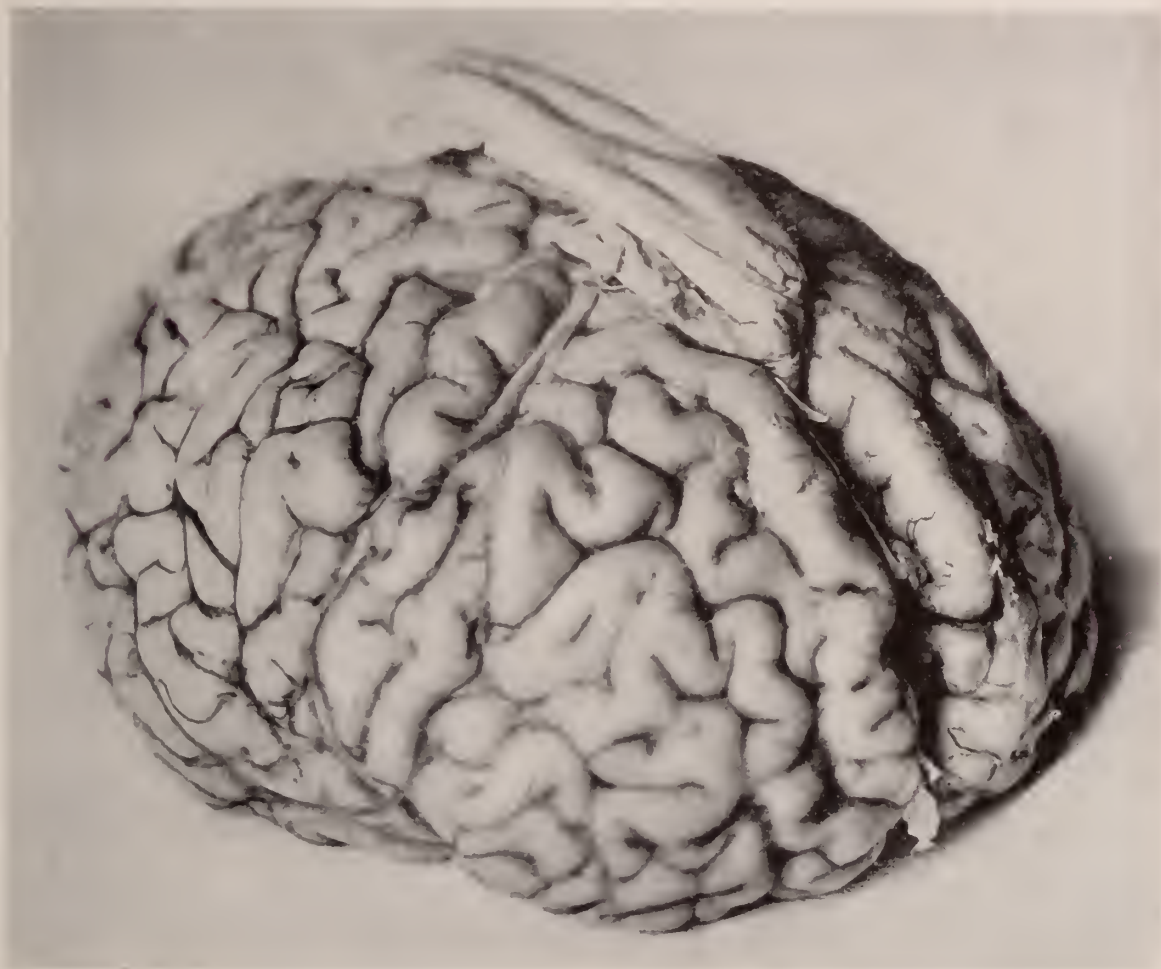


Fig. 1. Autopsy Specimen of Brain. Case A. B.

BLOOD TRANSFUSION—CLINICAL APPLICATION AND REACTIONS*

JOHN E. BOYD, M.D.,

and

GEORGE W. RICHARDSON, M.D.,

Jacksonville.

Blood transfusion at one time was looked upon as a "cure all." In fact, in 1556 Cardamus recommended that those people who were hopelessly immoral should be transfused with the blood of those strongly moral. Today the giving of blood to patients in need of such treatment is a life-saving measure which rests on a sane and safe basis. There still occurs, in spite of the utmost care, a varying percentage of reactions, which are,

in some instances, either directly or indirectly, the cause of death.

It has been suggested that the indications for giving a patient blood rest upon the necessity of restoring lost or impaired body tissue (blood) by a homologous transplant. This arose from a statement made by Dr. Hartwell who said that transfusion was a homologous transplantation of living tissue. Doctors Morgenthaler, Cochran and Davis in 1927 stated that transfusion was indicated in any case with sufficient anemia to lower the resistance of the patient. As early as 1872, Leisrink had said that transfusion was indicated in all pathologic conditions so altering the quantity and quality of the blood that it is unfit to fulfill its physiologic duties. Later investigations and experience show that transfused blood tends: (1) to restore the bulk of the circulating fluid;

*Last article in a series of three.

(2) to provide oxygen and assimilable pabulum for the tissues; (3) to increase the coagulability; (4) to stimulate the hematopoietic organs; (5) to increase the resistance to infection by its antitoxin and bactericidal properties. Blood transfusion has been found beneficial in hemorrhage, surgical shock, preoperative cases with secondary anemia, hemorrhage of the new born, illuminating gas poisoning, blood dyscrasias, chronic hemorrhagic diseases of the blood (hemophilia, purpura hemorrhagica, jaundice), and sepsis.

In chronic hemorrhagic diseases of the blood (hemophilia, purpura hemorrhagica, jaundice) the value of the treatment is altogether palliative and temporary. The use of serum in hemophilia is well known; the injection of whole blood is far more valuable. Neither form of treatment does more than temporarily increase the coagulation time. The hemorrhages in cases of purpura can be temporarily stopped by transfusing blood in moderate amounts. As a prophylactic measure against postoperative bleeding in jaundiced cases it has also proved its worth. It is also dependable in the oozing, after gastric surgery. The postoperative bleeding in cases of blood dyscrasia can be controlled but the ultimate course of the disease is not affected. In purpura the bleeding time is prolonged, while in hemophilia the coagulation time is prolonged.

In pernicious anemia the transfused blood temporarily replaces the red blood cells destroyed by the disease. Either from a failure of sufficient production (erythropoiesis), or because of an increased blood destruction, the anemia, nevertheless, progresses to a fatal termination. Soresi claimed that pernicious anemia and malignancy are two diseases in which transfusion is absolutely contraindicated. The conclusions of Archibald, however, were that the greater number of these patients, except those who have reached the last stage of the disease, will receive immediate benefit.

As a preoperative measure in all cases with a secondary anemia this procedure is invaluable as a preventative against shock. Whenever the abdominal cavity is opened there is more or less soiling of the peritoneum, which means a potential peritonitis. In all cases in which the body resistance has been impaired by chronic bleeding, malignancy or chronic infection, this complication is always more common. The value of transfusion, preoperatively, as a protection against this dread complication, is illimitable. Dr. Strauss transfused preoperatively 100 to 150 c.c. of the moth-

er's blood to prevent shock in cases of children requiring resection of the bowel for intussusception. There is no need to test the mother's blood in the case of children up to one year of age. Blood collected in the abdominal cavity from a ruptured spleen, pancreas, liver, ectopic pregnancy, or torn mesenteric vessel, also the blood collected from a removed spleen has been used in a large number of cases as an autotransfusion with excellent results.

Dr. Bruce Robertson, in *Archives of Surgery*, July, 1924, handles in a masterly manner the treatment of toxemias by blood-letting followed by blood transfusion. He says "This method of treatment was often ineffective owing to the relatively small proportion of the total quantity of blood which was removed and replaced. This proportion is fixed by the amount of blood which can be withdrawn from such a patient before he exhibits signs of exsanguination." He then calls attention to the method, *Exsanguination-Transfusion*, whereby greater amounts of blood may be withdrawn without danger to the patient, because of the blood being replaced simultaneously with its removal. However, this replacing of all or nearly all of the patient's blood puts a limitation on its general usefulness and restricts it to children under 3 or 4 years of age. He has used this method with encouraging results in the toxemias of severe burns; erysipelas; acute intestinal intoxication, resorcin poisoning, malignant scarlet fever, and septicemia. The fourth International Surgical Congress concluded that transfusion is ineffectual and even dangerous in the treatment of acute infections because of the hemolysis that develops in the blood of the infected individual. Dr. Lillie has used a combination of blood transfusion and germicidal dye in the treatment of sepsis of otitic origin with encouraging results.

This method of treatment yields its most spectacular results in cases of acute hemorrhage. It is also of great value in shock from hemorrhage, as well as shock alone. In all cases of shock there is a reduction in the effective blood volume and the volume flow. This is due to a vasoconstriction, which results in capillary stasis. There is, of course, a low venous pressure as well. Dr. Copher capitalizes the above knowledge by depending on the blood pressure and clinical picture as a guide for the need of transfusion in cases of shock. Blood counts and hemoglobin readings, he feels, have proven unreliable. The mild cases of hemorrhage, also cases of shock from hemorrhage,

require a restoration of the blood volume for the use of the depleted blood and other body fluid reserves. The severe cases require, in addition to the increase of the blood volume, an increase of the oxygen carrying elements. The normal quantity of blood is estimated to be 1/12 to 1/14 of the body weight, and clinically the rapid loss of 1/2 of the amount proves fatal.

The use of blood transfusion as a valuable method of treatment has been somewhat clouded by a percentage of reactions and at times dangerous accidents. No method has been devised that does not yield a varying percentage of reactions. The symptoms observed are fever, malaise, nausea, vomiting, chilly sensations or actual rigor, muscular pains, dyspnea, cyanosis, pruritus, urticaria, and headache. A wide variation as to the percentage of reactions is shown in the reports from different clinics. Pemberton of the Mayo Clinic, after 1,000 transfusions by the citrate method, had 21 per cent of reactions. Lewishon, in a special series, found 23 per cent after the citrate and 34 per cent with the Unger method. In 1914, Lindeman, in 150 syringe-canula transfusions, observed chills in 33 per cent. In 1916, he reported 146 transfusions, in which he had personally supervised the blood tests, with only 9 per cent of chills. In 1919, he performed 214 transfusions with no resultant chills.

In a review of the literature, we have found mentioned as causes in the universal reactions,—variation in the agglutinating ability of serums in different individuals of the same group; alteration in the chemical contents of the blood-plasma in certain diseases; variations in the hydrogen-ion concentration between the blood of the donor and the recipient; the introduction of bacteria, pathogenic or not, at the time of the transfusion; any method not permitting a rapid transference of the blood; the number of previous transfusions given the recipient; the possible presence of autoagglutins in cases of severe anemia, or in patients receiving a number of transfusions over a short period of time; any method permitting incipient coagulation changes. In reference to the causes in specific reactions reference was made in the citrate method to the lack of "reagent purity," also the lack of freshly distilled water; commercial preparations showing a variation in the hydrogen-ion concentration; the inability of sodium citrate to stand repeated sterilization; the danger of allowing the blood to stand; exposure to air allowing for a reduction in concentration; not washing the

flask with the solution and the balance being carefully dropped in; the danger from new rubber tubing. A review of the facts just enumerated is convincing evidence that no one cause or method is responsible for all reactions. The reduction of reactions, then, will depend largely upon a careful attention to all the details, as well as a realization that the operation is not minor in character.

Morganthaler, Cochran and Davis felt that reactions occurred principally when their technique was faulty. After an investigation they concluded that clot formation in the needles was an outstanding cause. The higher percentage of reactions seen, they claim, with the two-way valve methods can be thus explained. They further call attention to the fact that the caliber of the rubber tubing is many times larger than the caliber of the needle and this increases the incidence of clot formation along the sides of the tubing. In 1913, Ottenberg, Kaliski and Friedman concluded that multiple transfusions from a given donor to a given recipient developed specific agglutins and hemolysins in the recipient's blood not originally present. McLeney, Stearns, Fortune and Ferry stated that the repeated use of the same donor for one patient increases the frequency of reactions in direct proportion to the number of the transfusions. McLure and Dunn say: "In the patients for whom many transfusions have had to be done, it becomes more and more difficult to find donors whose blood would match." It has also been shown that the blood of some donors show a specially strong tendency to cause reactions.

In 1928, Brines, after having given 2,500 transfusions of unmodified blood, came out with the statement that his experience led him to feel that nephritis might constitute a contraindication to transfusion. He also said that the only other contraindications were pulmonary edema and a damaged myocardium. When giving large transfusions it is advisable to think of the possibility of acute dilatation of the heart.

Alexander and Brines say that air embolism is believed by many to be a joke. These views, they state, were acquired by animal experimentation. They also say that to the best of their knowledge air embolism has never been produced. It is admitted later in the article, however, that their attention has been called to a case in which, following the injection of about 3 c.c. of air into the veins, the patient died immediately. The facts in the case here reported are set forth as briefly as is consistent with clearness and would indicate a

contradiction of the prevailing opinion. It is left to the reader to decide as to the cause of death.

REPORT OF A CASE

A. B., a white male, 49 years old, was admitted to the Duval County Hospital, Jacksonville, Fla., December 13, 1929, on the surgical service. The chief complaint was loss of weight, anasarca, dyspnea, and general weakness. The man said that his illness began six months previously with indigestion, some pain in the upper abdomen, and a general decline in health. He was very much emaciated at the time of this examination. The Roentgenologist reported extensive involvement of the stomach wall by a mass, and the absence of obstruction at either orifice. The blood picture was that of a severe secondary anemia. A blood transfusion was undertaken at the request of the surgical chief. I was using a Scannell apparatus which had neither been cared for nor assembled by me. Owing to a faulty adjustment of the rubber tubing over the adapter, a leak developed on the donor's side of the instrument shortly after starting the transfusion. I attempted to control the leak while keeping the blood going so as to prevent clotting. After 40 c.c. of blood, with a small amount of air, had been given, the patient groaned but denied feeling badly. It was at this time I had the leak repaired. Following the giving of 20 c.c. more of blood the patient had a convulsive contraction of both his arms and legs, became comatose, and developed a slow pulse and a slow respiration, which soon stopped entirely. Artificial respiration and stimulants were used but he died after about one hour. The blood work was carefully rechecked and proved correct. An autopsy by the pathologist revealed the stomach densely adherent to the liver and its wall extensively involved by a mass, subsequently reported adenocarcinoma. The notation on the brain read: "On reflecting the meninges a remarkable condition was disclosed, in that the vessels of the right cerebral hemisphere, as seen on the vertex, were remarkably distended, not with blood, but apparently with air. This applies particularly to the vessels in the rolandic fissure and its branches. This distention is so marked that it reaches a diameter of 3 to 4 mm. near the longitudinal fissure. Distention of the vessels of the left cerebral hemisphere was not noted. When this unusual condition was found the vessels containing the air were tied off with linen so as to retain the air." (See Fig. 1.) What was the probable immediate cause of death?

ACUTE INTESTINAL OBSTRUCTION. THE VALUE OF SPINAL ANESTHESIA IN DETERMINING THE NECESSITY FOR SURGICAL EXPLORATION OF THE ABDOMEN*

GEORGE M. DAWSON, M.D.,
West Palm Beach.

Acute intestinal obstruction is becoming more prominent in surgical practice. The mortality rate is high and it increases with every minute of delay in intervention. It is often difficult to be certain that intestinal obstruction exists and the tendency is to wait for signs leading to a positive diagnosis. By the time operation is imperative the factors that cause death—interference with the intestinal circulation, dehydration, depletion of the salt reserves, and absorption of toxins—have been so long present that, even though the condition be relieved, the outcome is fatal. There have been no definite criteria on which to base an early diagnosis, and the judgment of the physician in deciding the necessity for operation is often defective.

Alvarez and Hosoi in this country, Arai and Hotz in Germany have done well-planned, properly-controlled experimental work on the mechanism of so-called paralytic ileus which has furnished a clue to a method of making an early decision for or against interference.

Alvarez has proven that normally the irritability of the bowel is graded from the duodenum to the ileum, the duodenum having the greatest irritability and the ileum the least. In animals, with experimental paralytic ileus from irritation of the ileocecal junction, this is reversed, the greatest irritability being in the ileum. In sections of the excised bowel there is no difference in the behavior of the parts of the injured and the normal animal. He concludes that the inability of the bowel to pass onward its contents in so-called paralytic ileus experimentally produced in animals is due to inhibition and reversal of the gradients from nervous control.

Arai produced peritonitis in animals and noted with the roentgen ray that the progress of the intestinal contents is slowed everywhere. He cut the splanchnics in normal animals and found the peristalsis more active than in the animals with splanchnics intact. He then produced peritonitis in animals with cut splanchnics and found that

*From the surgical service of the Good Samaritan Hospital, West Palm Beach.

the peritonitis had no effect on the passage of the bowel contents. The conclusion is that in paralytic ileus the intestinal muscle is capable of active contraction even in the presence of peritonitis and is prevented from action by nervous inhibition.

In human treatment it is obviously impractical to paralyze the splanchnics by surgical means, but we may accomplish it as effectively by means of spinal anesthesia. William Bartlett, Jr., states that: "If, within 15 minutes after the injection of the spinal anesthetic, passage of gas and feces and disappearance of distention be not obtained, enterostomy should be performed immediately, thus taking advantage of the anesthesia already produced." I have followed this criterion in handling this type of patient and found it exceedingly reliable. The following case reports will serve to illustrate its value:

CASE 1.—A male, aged 25 years, white, was admitted to the hospital Jan. 18, 1929. An acutely inflamed gangrenous, ruptured appendix was removed at operation. Convalescence was usual up to the fifth post-operative day. There was no distention or vomiting, the drainage was excellent and the temperature dropped from 102 to 99 F. A small bowel action accompanied by gas followed an enema on the third day.

The morning of the fifth day moderate distention was noted. Twelve hours later the abdomen was drum-like, vomiting had started, there was no change in the temperature, the pulse rate had increased. Gastric lavage stopped the vomiting temporarily. Colon irrigations, stupes to the abdomen, pituitrin and eserine failed to relieve the distention.

The morning of the sixth day the condition had not improved. Novocain crystals 0.3 gm. dissolved in spinal fluid were injected into the spinal canal through the second lumbar space. Fifteen minutes later a small enema resulted in the expulsion of large quantities of gas and fecal matter, the vomiting stopped and the patient fell into a natural sleep. Slight distention recurred daily during the next five days but it was easily controlled by the usual treatment.

CASE 2.—A male, aged 54 years, white, was admitted to the hospital with a diagnosis of acute intestinal obstruction. Four days previously he had a sudden acute pain in the left costo-vertebral angle radiating to the left testis, accompanied by frequency and urgency of urination. The attending physician made a preliminary diagnosis of

nephrolithiasis. Morphine completely relieved the pain and the next day he went about his usual work. He was apparently entirely well for three days. Six hours before admission he had a sudden acute pain in the right lower quadrant of the abdomen, cramp-like in character with no radiation. Vomiting started 2 hours after the onset of the pain.

On admission, the patient was suffering acute generalized abdominal pain and was vomiting continuously. The temperature was 97, pulse 120, respiration 24, white blood corpuscles 10,000, polys. 78. The urine was normal. The abdomen was extremely distended. There was generalized abdominal tenderness and rigidity with no tenderness in the costo-vertebral angles. Gastric lavage, colon irrigations, eserine, pituitrin, hot stupes, gave no relief.

Two hours after admission one ampule of Pitkin's spinocain was injected into the spinal canal through the 3rd lumbar space. After 15 minutes a small soapsuds enema resulted in the expulsion of large amounts of gas and feces. One hour later, following a colon irrigation, the distention entirely disappeared, the vomiting stopped, the pulse rate dropped to 90 and the patient was comfortable. The following morning he felt entirely well. Three days later he passed several small stones in the urine. Subsequent roentgen ray examination proved the gastro-intestinal tract to be entirely normal.

CASE 3.—A male, aged 35 years, white, was admitted to the hospital with a diagnosis of acute appendicitis. At operation an acutely inflamed, gangrenous appendix was removed. Progress was usual up to the fourth post-operative day. The morning of the fourth day he vomited the coffee he had taken one hour before. Two hours later the abdomen was extremely distended, vomiting was continuous, the pulse rate had risen from 90 to 120, the temperature was 99 F. The usual treatment failed to relieve him. Four hours after the onset of the vomiting one ampule of Pitkin's spinocain was administered. Fifteen minutes later an enema was given with no result. Enterostomy was performed under the existing anesthesia. After two days of stormy convalescence the distention was relieved through the enterostomy opening.

CASE 4.—A boy, 19 years old, white, was admitted to the hospital March 4, 1929, with a diagnosis of acute appendicitis. At operation an acutely inflamed, retrocecal, retroperitoneal

appendix was removed. Convalescence was satisfactory until the sixth post-operative day.

The morning of the sixth day vomiting started after a fluid breakfast. Abdominal distention became definitely noticeable about one hour later. He was suffering with severe cramp-like pain in the lower abdomen. Colon irrigations, gastric lavage, intravenous saline and glucose relieved the condition until the eighth post-operative day. At this time vomiting was continuous, the abdomen was drum-like, and no gas or feces were passed after treatment.

One ampule of Pitkin's spinocain was injected through the second lumbar space. Fifteen minutes later a soapsuds enema was given with no results. At operation, performed under existing anesthesia, a strong band of adhesions was found extending from the tip of cecum to the mesentery of the small intestine under which a loop of ileum had been constricted. The adhesions were freed and an enterostomy done. Convalescence was uneventful.

CASE 5.—A woman, aged 40 years, white, was admitted to the hospital March 14th, 1930. Six years previous to the present illness a sub-total hysterectomy had been done for fibro-miomata of the uterus. There had been no illness of any sort since the operation.

Four hours before admission there was a sudden onset of acute abdominal pain accompanied by vomiting. The pain was sharp, excruciating, over the entire abdomen, with no radiation. There were no respiratory or urinary symptoms. The attending physician administered large doses of morphine with no relief from pain.

On admission to the hospital the pain had not changed, vomiting had stopped, the pulse was 130, temperature 99, respiration 36, white blood corpuscles 8600, polys. 76. There was no abdominal distention or rigidity. Tenderness was generalized but more marked in the epigastrium. No masses were felt. Colon irrigation caused increased pain but no gas or feces were passed. One ampule of Pitkin's spinocain was injected into the spinal canal through the second lumbar space. Fifteen minutes later an enema was given with no result.

At operation there was a volvulus of the ileum around a strong band of adhesions extending from the stump of the cervix to a loop of small intestine. No resection was necessary and the patient recovered after an uneventful convalescence. This picture was particularly confusing

because pain was the presenting symptom accompanied by slight vomiting and no positive abdominal signs.

In the first two cases the procedure recommended made me sure of my ground in delaying intervention and saved the patients an exploratory operation. In the last three cases a definite diagnosis was evident after the use of spinal anesthesia which allowed me to operate with the certainty that it was necessary. It seems that we have in spinal anesthesia a reliable test on which to base a diagnosis of acute intestinal obstruction before the condition of the patient is such that operation is of no avail.

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RHEUMATIC FEVER AND LOBAR PNEUMONIA: NOTES ON OCCURRENCE IN SOUTHERN FLORIDA*

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We who practice in southern Florida have remarked on the infrequency of some of the acute diseases ordinarily encountered frequently in colder states. This paper represents an attempt to chart the incidence and note the character of two important diseases which are commonly said to occur rarely in this climate. *Acute rheumatic fever* was chosen for this inquiry because of its etiological importance in heart disease, for this fever may well be said to be a disease of the heart, in its essential respects. *Acute lobar pneumonia* was studied because it bears the reputation of causing more deaths in the United States than any other acute infection.

ACUTE RHEUMATIC FEVER

Because of frequent confusion with other diseases of arthritic nature, the usual features of this disease will be reviewed. The onset of acute rheumatic fever is usually sudden and may be preceded by an attack of tonsillitis. There may be chill, headache, general pains. The joints in particular are very painful and are swollen, hot and flushed, the larger joints being involved first either together or following one another in fleeting

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fashion. Even slight motion of an inflamed joint may cause severe pain and the tenderness may even render the weight of the bedclothing intolerable. The fever reaches its peak about the third day, ranging from 102 to 104. The heart involvement becomes manifest sooner or later in most cases, principally as endocarditis, though myocarditis or pericarditis may develop. The evidence for cardiac involvement may be only presumptive, such as fever with tachycardia out of proportion to the fever, or the sudden occurrence of pain in the heart, or slight enlargement of the heart, or the appearance of an apical murmur not previously present. A loud systolic murmur heard at the apex early in rheumatic fever is much less likely to be an indication of acute rheumatic endocarditis than a very soft systolic blow, according to Christian.¹ In *children*, the joint pains may be so mild as to pass unnoticed, there being simply prolonged indefinite fever and signs of carditis. Subcutaneous rheumatic nodules may appear. Chorea is almost as frequent a manifestation of rheumatic fever in children as are the joint symptoms, and may be the only sign of the infection present for a long period of time.

Incidence:

A review of approximately three thousand consecutive private case records covering the past five-year period (August, 1925, to August, 1930), revealed only three cases of acute rheumatic fever.

A review of the available records of Jackson Memorial Hospital, Miami, was made. This is a general hospital admitting a mixture of private and charity, white and colored patients. From January, 1925, to July, 1930, a period of 5½ years, there were approximately 31,000 patients admitted for treatment. Of this number, 13 were improperly classed as suffering from acute rheumatic fever, but actually were cases of infectious arthritis, gonorrheal arthritis, osteomyelitis, acute gout, bacterial endocarditis with joint manifestations, or focal reactions in joints due to abscessed teeth.

Four true cases of acute rheumatic fever and six cases of chorea, a total of 10 cases, were admitted to the hospital during this period of time. This affords an average incidence of 1 case of acute rheumatic fever or chorea per 3,000 admissions to the hospital.

The course and severity of these cases did not differ from the ordinary. There was manifest endocarditis in five cases, and presumptive evidence of it in two additional cases. One patient

died from cardiac decompensation. It should be mentioned that none of these cases were negroes.

ACUTE LOBAR PNEUMONIA

According to Dr. MacDonell of the Health Department of Miami, there were on the average 72 cases of lobar pneumonia reported by physicians each year during the past four years (1926-1929 inclusive). If the average population of the city is considered to be 125,000, a ratio of 1 case per 1700 of the populace is obtained.

A more accurate estimate of the incidence of lobar pneumonia was obtained, however, by studying the records of Jackson Memorial Hospital for the period from January, 1925, to July, 1930 (5½ years). Among the approximate 31,000 patients admitted during this period, there were 152 cases of lobar pneumonia, giving rise to a rough incidence of 1 case per 200 patients.

A rather complete analysis of these 152 case records was made and because the series was obtained in a general hospital over a long period of time, the evolved information is reasonably likely to be typical of lobar pneumonia as it occurs in southern Florida. Table I summarizes the data.

The following etiological factors were noted:

Season: 66 cases or 43% occurred from December to March, the coolest months of the year, otherwise there was practically no variation from month to month.

Cold: Only occasional histories indicated body chilling or exposure.

Sex: About three times as many men as women were affected.

Ages: All ages were represented, the youngest being 9 months, the oldest 78 years, but half of the cases were between 20 and 40 years of age.

Race: 60% were white and 40% colored patients. Only 21% of the hospital admissions were colored, so the ratio among colored is high.

Operative procedures: 1 case followed tonsillectomy and another came after the extraction of teeth.

Trauma: 1 case followed injury to the chest.

Association with other diseases: 6 patients had heart disease, 2 had nephritis, 2 had malaria, 2 had pyelitis, 1 had meningitis, 1 was a victim of Raynaud's disease. Tuberculosis was suspected in 4 cases.

Exciting cause: Only occasional bacteriological studies were made.

The symptomatology of the disease differed in no way from the usual case. Chill was common at the onset, with pain in the chest, dyspnea and

rusty sputum. The average length of fever was 8 days and terminated by crisis in half of the surviving cases. The fever was shorter in the cases which ended by crisis. The right lower lobe was principally involved and the left lower next in frequency.

The leucocyte count averaged 20,500 in the hundred cases in which a count was made. In 26 cases it ranged from 20,000 to 30,000 and in 16 patients it was between 30,000 and 45,000.

Complications arose as follows:

Pleurisy was present in the majority of cases but was not considered a complication unless a serous effusion appeared large enough to be obvious clinically, and this happened in only 5 cases.

Empyema developed in 16 cases, which is a heavy incidence, but 9 of these cases were brought into the hospital only after the empyema appeared, having passed through the pneumonia stage at home.

Delayed resolution was encountered in 3 patients.

Jaundice was noted twice.

Lung abscess occurred once, with a secondary invasion of *oidium albicans*.

Meningitis and otitis media occurred together in one patient, and it was rather questionable which was the primary disease.

The mortality rate, as indicated in the table, was 27.1%, with a slightly lower rate among the negroes. Compared to figures from different epidemics of lobar pneumonia varying from 20% to 60%, this does not seem high. However, the average death rate according to Wells² in nearly half a million cases collected by him, was only 20.4%. More than half of the 41 deaths in this series were in patients between the ages of 20 and 40 years which parallels the incidence of the disease at these ages. Since treatment was symptomatic only, with few exceptions, there was no evidence that treatment influenced the death rate very much. One death should be emphasized, for

it occurred spontaneously a few minutes following aspiration of the right chest in a negro suspected of having fluid present, who was not extremely ill prior to the thoracentesis.

SUMMARY

An attempt has been made to accurately judge of the frequency with which acute rheumatic fever and lobar pneumonia occur in southern Florida. Among 3,000 private records of the author only 3 cases of rheumatic fever were found. Among 31,000 hospital records there were 10 cases of rheumatic fever or chorea, and 152 cases of lobar pneumonia.

CONCLUSION

The incidence of acute rheumatic fever in this climate is extremely low, and, therefore, we should find among children born and reared in this area practically no heart disease of rheumatic origin. This fact needs to be emphasized to the laity, for the prevention of heart disease is one of the greatest tasks of the day before the medical profession.

The incidence of lobar pneumonia is fairly low, though higher than many physicians practicing in southern Florida are aware of. Once contracted, the character of the disease is apparently not altered to any great extent by the salubrious climate. There do not appear to be any epidemics of lobar pneumonia, however, as sometimes occur in the north.

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DISORDERS OF THE HEART SECONDARY TO THYROID DISEASE*

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Heart disease is now being well classified from earliest infancy where we see the first manifestations of congenital heart lesion to the decompensating heart of the aged arteriosclerotic. Three major classifications can be universally used. These are the nervous or irritative heart, the toxic, and the organic heart. These may be found at practically all ages in both sexes. In this paper no attempt will be made to subdivide this crude classification, the object being primarily to discuss those falling into the toxic class and particularly

TABLE I.

ANALYSIS OF 152 CASES OF LOBAR PNEUMONIA

Year	Number Patients	White	Colored	Male	Female	White Deaths	Colored Deaths	Total Deaths
1925	37	25	12	30	7	10	2	12
1926	39	25	14	33	6	6	4	10
1927	24	14	10	16	8	2	2	4
1928	22	11	11	14	8	4	3	7
1929	18	12	6	13	5	2	3	5
1930	12	4	8	11	1	2	1	3
(6 mo)								
Totals	152	91	61	117	35	26	15	41
Ratio	.....	60%	40%	77%	23%	28.5%	24.5%	27.1%

*Read before the 4th Annual Meeting of the East Coast Medical Association, Melbourne, Oct. 2, 3, 1930.

those of the thyrotoxic group. The general practitioner simplifies the diagnosis of the syndrome; dyspnea, precordial pain, various heart murmurs, enlargement of the heart, swollen and tender liver and accumulation of fluid in the extremities and the abdomen by calling it "heart failure" and generally the treatment is as simple, digitalis and sedative constituting the major portion. Some hospital internes quickly make a diagnosis of "cardiac" and glibly prescribe "digitalis, drams 1 q. 4 h. for four doses then minims 20, t. i. d. until the pulse is below 80" and calmly await death or recovery sufficient to allow the patient to leave the hospital.

In reviewing the cases of thyrotoxicosis in Riverside Hospital in the past five years, we have found that approximately 25% of these have been referred to us with a diagnosis of heart disease. No effort has been made to ascertain the ratio of this group to the total number of patients with definite cardiac disease and certainly the percentage would not be more than a fraction. However, this fraction should well justify the clinician in searching for extra cardiac pathology in every case in which there is any suspicion of thyroid disease.

The following are a few case reports which well illustrate the value of a thorough study:

Miss L., age forty-four. Was seen in November, 1929, with complaint of shortness of breath and swelling of the ankles in the afternoon for past two weeks. Gradually growing worse. With the exception of pulse rate of 120, blood pressure of 125/40, there were no physical findings of hyperthyroidism. The metabolic rate was plus 32. After routine preliminary treatment, a subtotal thyroidectomy was done. Symptoms subsided. Eight months later the heart was normal and the metabolic rate minus 4%.

Mrs. B., age sixty. First seen in December, 1926, with complaint of dyspnea and sore pulsating abdomen. Became ill three or four months previously with dyspnea, pounding heart, weakness. These symptoms became more pronounced and in a few weeks began to develop soreness in right upper quadrant with increase in dyspnea and pounding to such an extent that she was practically bedridden. A physician was called and made a diagnosis of heart trouble and advised complete rest in bed. Was followed over a period of two months by two competent internists who verified this diagnosis. Failed to improve and consulted us as to further treatment.

Examination revealed a well-developed but poorly nourished individual who appeared to be extremely nervous and restless. The thyroid gland showed very slight enlargement at the isthmus. The heart was slightly enlarged to the left. No shock or thrills. Sounds are clear, loud and snappy. No arrhythmia. Blood pressure 135/70. There was a markedly visible pulsating abdominal aorta. The abdomen was generally quite tender to palpation. From the xiphoid to the femoral arteries, a pistol shot sound could be heard along the course of the aorta and iliacs. In the course of her examination the metabolic rate was found to be plus 36%. Operation was refused. The patient was placed on iodine and X-ray therapy with subsequent symptomatic improvement. Unfortunately, no follow-up history is obtainable on account of the patient leaving Florida.

Mrs. B., age sixty-four, was seen in March, 1927. Ten months prior to this date noticed some palpitation of heart and nervousness. Consulted a local physician, who advised rest and treatment for thyroid disease. She continued to work and in four months became so much worse another physician was consulted who made a diagnosis of nervous breakdown and placed her in the hospital for one month. She showed no improvement and was advised to go to the country for rest and relaxation. Failed to improve and after six months was referred to us as a cardiac sufferer. She had lost twenty-five pounds in the past year.

Examination revealed a palpable thyroid. Heart was slightly enlarged to the left and findings were otherwise negative with the exception of rhythmic extra systoles occurring every fifth cycle; rate 120. Metabolism was found to be plus 26%. A subtotal thyroidectomy was done. Convalescence normal. Nervousness gradually cleared. No further trouble from heart.

Mrs. S., age forty-eight, first seen August 16, 1928, giving the history of one year ago having had an attack of dyspnea, cardiac pain, fast pulse and general collapse which kept her in bed three months. Gradually improved enough to take care of household duties. One month ago had an accident from which she suffered general contusions and Colle's fracture, right. For this she remained in bed about two weeks. When she began getting up, husband noticed that pulse was faster than usual.

Six days before admission, she began having pain around her heart, dyspnea, palpitation, chills

and fever. These continued to get worse; she grew stuporous and delirious at height of fever, which at times was 104 and 105, and was admitted to the hospital with temperature of 105, pulse 150, as an acute cardiac emergency. She was found to be orthopneic, stuporous; thyroid gland was about twice usual size, heart 10 cm. to left of midline, sounds were loud and clear with the exception of systolic mitral murmur not transmitted. Blood pressure 170/0. Lungs congested at bases. Liver enlarged and tender. Feet and legs moderately edematous. Electrocardiogram was negative with the exception of tachycardia. A preliminary diagnosis of acute thyrotoxicosis was made and substantiated when the metabolic rate was found to be plus 72%. Routine preoperative treatment was administered and two weeks later, subtotal thyroidectomy was performed. Convalescence was rapid and recovery apparently complete for six months, when she began having mild recurrence of symptoms. Was followed carefully for eight months more when a bit of gland about three-quarters inch in diameter was removed. For past ten months she has been in good health.

Miss R., age sixty-nine, was seen in May, 1929, with a history of having had increasing dyspnea and edema of feet and ankles for the past four weeks. Following rest in bed, the edema disappeared but the dyspnea became more marked. Has had thyroid enlargement since a girl. No increase in size or change in characteristics for many years.

On examination, the thyroid gland was found to be bilaterally enlarged, about four times normal size, with several adenomatous nodules. The heart extended twelve cm. to the left of the midline at the sixth i. c. s. Rate 110. No rhythm. Sounds were clear. Liver, two fingerbreadths below costal margin, slightly tender. The electrocardiogram showed auricular fibrillation. Metabolic rate, plus 7%. Remained in bed four weeks on digitalis therapy. All symptoms disappeared, including the fibrillation and pulse rate dropped to 70. She remained at home ten days on the same treatment as that in hospital. Symptoms began to return and in spite of normal metabolic rate, a diagnosis of thyrotoxicosis was made. After re-admission to the hospital, a subtotal thyroidectomy was done and now for more than one year this lady has had no fibrillation and in spite of occasional flare-up of metabolic rate to as high as plus 18%, has remained in fair state of health.

The few representative cases just presented are

typical of those in which no organic heart lesion can be clinically demonstrated. With the exception of an increase in pulse rate and increase or relative increase in blood pressure, constant cardiac findings are not necessarily present. In our series, the blood pressure readings averaged 141 systolic, 59 diastolic, giving a pulse pressure of 82. As the disease progresses, the picture may change when insufficiency develops, presenting changes in rhythm, extra systoles, fibrillation and hypertrophy and dilatation of the heart. In cases where there is a superimposed heart lesion, the diagnosis is much more difficult, since the history obtained from the patient of cardiac disease of long standing and the findings of a definite lesion may easily convince the clinician that he is dealing solely with definite cardiac disease. However, if a more carefully obtained history reveals that the patient has lost weight and has become increasingly restless and irritable and on examination any of the findings commonly associated with hyperplastic thyroid disease are present then a basal metabolic test will quite frequently allow us to transfer this patient from the incurable heart class to the thyrotoxic group for which measures may be taken to restore the patient to health.

SOME OF THE FACTORS CONCERNING PULMONARY TUBERCULOSIS*

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Sixty years ago the death rate from tuberculosis was approximately 3300 per one million of the population, whereas in 1910 the death rate was 1500 per one million. In fifty years, the death rate has been reduced to less than half. Setting aside the war years, this progressive fall in the death rate is still taking place as shown by the latest returns, showing an annual decline of 36 deaths per one million of the population.

The cause of the decline is of primary importance to all of us, both from a standpoint of health and the economic welfare of our respective communities. It must be admitted that there is no obvious single explanation. The discovery of the tubercle bacillus by Koch and the introduction of sanatorium treatment has had no obvious effect. The cause or causes have been acting continuously for sixty years. Several factors have been considered. The virulence of the bacillus may have diminished; the inhabitants may have

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developed more resistance, but there is no evidence that either of these is a satisfactory explanation, and the partial victory over the attacks of the bacillus must be attributed to those allies grouped under the head of improved social conditions and the trend toward tuberculization of the human family.

The various lesions caused by tuberculosis are due to two strains of the bacillus: the human and the bovine. The bovine strain takes a greater toll of life in the first decade, after which the human strain is the cause of the large majority of the deaths. Chronic pulmonary tuberculosis is rarely seen before the age of ten years, and approximately 99 per cent of cases in all ages is caused by the human strain.

The dominant sources of infection are, therefore, other patients suffering from the human strain. If segregation were possible of all cases of phthisis there would then be practically no risk of the disease in factories, public houses or ill-kept homes. In the early stages of the disease there is little difficulty in persuading patients to enter hospitals. Apart from their own interest, this has the advantage of segregation and education in knowledge for the protection of others. The greatest difficulty in connection with the segregation of consumptives is the objection on the part of the patient to staying in, or even entering the home for advanced cases. The patient feels that he is regarded as a hopeless case. He sees around him others in even worse condition than himself. Finally, he sees death claiming them one by one. It is indeed an unenviable position, and the only recompense for the patient is in the realization that he has the advantage of skilled nursing, and is saving his own family and relations.

A further point of extreme importance in the causation of the disease is the quantity of the bacillus in the dose or doses which are sufficient to cause disease. This is closely connected with the vexed question of natural or acquired immunity. It is highly probable that no adult has escaped infection, but infection does not necessarily cause disease, and disease is not necessarily progressive after it has been acquired. The workers of the National Tuberculosis Association have determined that the powers of resistance of different individuals differ considerably, and that any single individual varies from time to time. A dose of tubercle bacilli, therefore, which would be harmless to one might seriously infect

another, or even that one under certain circumstances. On the other hand, there are doses so small as to be incapable of infecting anybody, and others so large that no one, no matter how high his resisting power, can escape if he receives them. Doses which lie between these limits produce results which vary according to the resisting power of the individual at the moment; for example, parturition, an attack of measles or influenza, might cause infections, which otherwise would be trivial, to become dangerous, while, if no such untoward circumstances should arise, similar doses might cause results limited to a few circumscribed lesions causing no definite symptoms and which would never become recognized during life. The limit which divides the dangerous from the harmless doses, then differs with every individual, and varies with circumstances, but on the whole, large doses are decidedly more dangerous than small ones. Very large doses are deadly and overcome the most resistant, while very small doses are harmless even to the most susceptible.

The next point to consider is the possibility of so treating the patients who have the disease as to eliminate them from all risks of spreading it. The necessity of early diagnosis for successful treatment has been rigidly and rightly urged for many years. And here we are faced with a very difficult problem.

With tubercle bacilli in the sputum we are not concerned, for these are proved cases, but what are the most reliable means of making a confident diagnosis before this stage? We can consider the symptoms and signs together, and in this respect I have no hesitation in asserting that every combination of symptoms and signs resulting from infection with the tubercle bacillus is simulated by diseases caused by other organisms; and, therefore, that by signs and symptoms alone, we are unable to make, in all cases, early and exact diagnoses of active pulmonary tuberculosis.

Every doubtful case demands further investigation. During recent years many claims for the pre-eminence of the X-ray in early diagnosis have been advanced. It is certain that during the World War many hundreds of men were discharged from the service for consumption, mainly on X-ray evidence, who had no consumption at all. The points on which X-ray diagnosis depend are four, viz.: failure to brighten at the apex is perhaps the more delicate expression of the poor air entry noted by the stethoscope, but it has long been realized that this auscultation sign is insuf-

ficient; therefore, the more delicate expression of it on the X-ray is even less reliable. A stammering or jerky diaphragm is the resurrection of the cog-wheel breathing so much relied upon in former times. Mottled shadowing, which is of the chief importance, is present in active and arrested cases, and also in other infections, and is not conclusive. A narrow, vertically placed heart is of as much value for diagnostic purposes as the character of the patient's hair. These are the signs which are often relied upon for early diagnosis, but they will not do. When emphysema is present, the X-ray is most useful. When the question of artificial pneumothorax is being considered, the X-ray is invaluable, and at all times when the actual extent of the disease is accurately required. Various specific methods have had their vogue and have been found wanting in that they include many who are not tuberculous and exclude some who are.

The general aspects of the treatment of later cases of the disease include sanatoria and artificial pneumothorax. The value of institutional treatment is: (1) to encourage segregation; (2) training patients to dispose of their sputa without risk of spreading; (3) effecting arrest of the disease, and (4) the collapsing of a lung by the introduction of air into the pleural cavity thereby rendering the sputa bacilli free. No exact figure can be given because it varies with the different series of cases, but a fair statement would be that about half the cases, in which a satisfactory collapse of the lung has been obtained, cease to have tubercle bacilli in the sputum.

The conclusions to be drawn from the facts enumerated here are that the elimination of pulmonary tuberculosis can best be effected according to our present knowledge by the following means:

1. Segregation—(a) in hospitals; (b) in sanatoria; (c) in homes for the advanced cases.
2. Education of the patient as to the proper method of disposal of his sputum.
3. Improved sanitation in the factories, public gathering halls, etc., and the home.
4. Treatment of early apyrexial cases in sanatoria, and suitable pyrexial cases by artificial pneumothorax.

Until we can say to every patient who has tubercle bacilli in the sputum: "Here is a hospital, or a sanatorium, or a home for you to go to," we need not pause to say: "What is the next thing to be done to eradicate the disease?"

War has been waged for many years against the tubercle bacillus, and still many victims are claimed daily, but our chances of victory improve, and we may feel encouraged to believe that those of us who should survive the next thirty years will come to regard tuberculosis as a rare disease.

BRONCHIAL SPIROCHETOSIS*

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Bronchial spirochetosis is an infection of the bronchial tree or the lung parenchyma by spirochetes. It is thought that when the infection is in the bronchi the chronicity of the cough and hemorrhage are the outstanding features, while in the lung proper gangrene is the process carried on, and which usually terminates in death when unrecognized and untreated.

Castellani in India, in 1903 described the first case of spirochetel gangrene of the lung; the honor of describing the first case of bronchial spirochetosis in 1906 also belongs to him. At that time it was estimated that 5% of the population of India was infected.

The various types of spirochetes present show numerous morphological differences. They are all short with few curves and resemble Vincent's more than any other type; also, the fusiform bacilli are practically always present. Some of the spirochetes are short, others long; some have tapering ends, others stubby; some stain more heavily in the center than the periphery; some are motile, others non-motile, and various types may be seen in the same case. I might say that we have been unable to grow these organisms, although the fusiform bacilli should grow on blood agar.

Castellani has described 3 types: the acute, subacute, and chronic, with characteristic sputa. Others have classified the disease as acute and chronic, which is the classification I prefer, and more accurately describes the cases I have seen.

The sputum of these cases is not always characteristic. In acute cases it is frothy and blood-streaked. In chronic cases it may separate in 3 layers: the bottom mucoid with brown flecks, middle clear, and top frothy. If gangrene or lung abscess is present, foul-smelling purulent sputum results. In the acute and sub-acute cases the sputum is practically odorless. The spirochetes are best found in the brown flecks

*Read before the Pinellas County Medical Society, November 21, 1930.

in chronic cases, and in the mucoid material and blood streaks in the acute cases.

The best stain to demonstrate the spirochetes is Carbol-gentian violet. As a matter of routine we run a Carbol-gentian violet stain when we run one for acid-fast bacilli.

Spirochetes are found in the sputum principally in cases of lung gangrene, lung abscess, pneumonia, pulmonary tuberculosis, and bronchial asthma. It has been held by some that the spirochetes are merely accidental invaders, but from my experience I believe that they are the causative organisms, because they disappear from the sputum as the patient's clinical symptoms clear up under specific treatment.

The symptoms, as well as the physical findings vary according to the severity of the infection. In acute cases high fever, cough almost uncontrollable and paroxysmal in character, pain in chest, blood-streaked sputum, and even small hemorrhages are present. In chronic cases frothy sputum, chronic cough, occasional fever, and usually some neuritic pains are the outstanding features.

The physical findings also vary. In the acute cases any type of rale in the lung may be heard, but there seems to be no dullness, no difference in fremitus or expansion except when complicated by lung abscess, pneumonia, gangrene, pleurisy, or tuberculosis. In chronic cases there usually can be found a few crepitant rales at the apices or base of the lung. The findings are always bilateral.

X-ray findings are usually negative except when complications exist, but may show inflammatory reaction.

In every case I have seen there has been a positive smear from the mouth. In all cases the mouth and throat have been cleared of infection before a sputum is accepted as positive, as it is possible in a Vincent's infection of the mouth to get a positive sputum due to mouth contamination. In a series of unselected cases Dr. McLean has shown that 40% of the smears from apparently healthy mouths are positive for Vincent's.

The treatment for these cases is specific. Tartar emetic and salvarsan are used intravenously along with symptomatic treatment.

The following reports are characteristic of the acute and chronic cases respectively:

Acute.—C. W., white male, married, age 26. He had always been healthy, but had had Vincent's infection of the gums for the past two years. His teeth had been treated at intervals during this

time, but always got worse when treatment was stopped. It was therefore decided to extract all the teeth; this was done under ether anesthesia April 15th of this year.

He seemed to get along nicely until June 10th, when he was taken sick with an apparent chest cold. He became continually worse and in a few days was spitting up frank blood. The cough was paroxysmal in character and almost uncontrollable. The fever stayed around 105. Almost every type of rale could be heard in the chest. The white count June 18th was 14,200, polys 82; urine negative. The sputum was loaded with spirochetes and fusiform bacilli. The patient was given neoarsphenamine twice weekly and after the third treatment the fever was gone. He began to improve after the first treatment. Three more, making six in all, treatments were given and the man went back to work.

He got along nicely for about one month. He was gaining in weight and his chest had almost cleared. Then he developed an abscess from a root that had been left in his mouth. A smear from the pus showed numerous spirochetes and the man again was taken sick and passed through practically the same thing he had before. The treatment was somewhat changed: tartar emetic was given intravenously instead of neoarsphenamine. He received 7 treatments during the month, and two weeks later was at work again. November 10th he had a severe cold with some temperature, but it lasted only 3 days, and his sputum was negative for spirochetes. His chest now is negative as far as I can determine; he has gained his normal weight back and is working every day. I consider him entirely well.

Chronic Case.—Miss E. B., single, white female, age 53; school teacher. This patient came into the office complaining of pain in the neck, cough, and loss of weight. The pain was neuritic in character, and extended from the chest into the neck. Her cough was productive and was worse in the morning. She had had these symptoms for several years and they had started from an acute chest condition of some type.

Her physical examination was negative except for some gingivitis and a few crepitant rales in both apices of the lungs. The blood count, urine, and stool were all negative. The sputum showed spirochetes and fusiform bacilli after mouth sinears were negative.

She was given 6 neoarsphenamine treatments and 6 tartar emetic. These cleared up her symp-

toms and the rales disappeared. I heard from her one year later and she was at that time apparently well.

On both of these cases the blood Wassermanns were negative.

CONCLUSION

Bronchial spirochetosis is probably more prevalent than is thought, and every sputum examination should include an examination for spirochetes.

Cases of lung gangrene have a history of long-standing lung trouble and probably early treatment of these cases would prevent the gangrene.

Some acute cases of spirochetosis will clear up spontaneously, but have a tendency to relapse; hence, specific treatment should be employed unless there are contraindications to the drug.

Paracentesis should not be done if the process spreads to the pleura.

Correct dental hygiene by keeping the mouth free of infection would probably lessen the chances of lung infection, especially following inhalation anesthesia.

SICKLE CELL ANEMIA—REPORT OF TWO CASES*

W. G. MILES, M.D.,
Chattahoochee.

It is Sydenstricker's opinion that sickle cell anemia is not so rare as the literature would indicate; he says that forty cases within sixteen months had been recognized in his clinic. Comparatively few have been reported in the literature.

ETIOLOGY

All authors agree that the disease is familial and hereditary, occurring indiscriminately as regards sex, and appearing in many members of affected families. Sydenstricker says the dyscrasia undoubtedly follows Mendel's law and manifests itself as a dominant characteristic. Up to the present, all cases have occurred in negroes and mulattoes. The youngest patient was three months and the oldest 67 years.

SYMPTOMS

Certain symptoms and physical signs are constant; namely, muscle and joint pains, abdominal

crises, a peculiar sclerotic discoloration, general glandular enlargement, anemia and urobilinuria.

In nine cases out of twelve, ulcers were observed in the ankle region. They are bilateral, multiple, sharply demarcated and heal slowly and tend to recur with relapses.

There are two phases of symptoms—active and latent. In the active phase anemia is pronounced, and many of the symptoms, especially dyspnea, palpitation and weakness, are referable to it. Pain, arthritic and muscular, without inflammation, is constant. Low grade fever and night sweats are common. Exacerbations occur, so that the history is one of remissions and relapses.

In the latent phase, patients presenting no symptoms of anemia, on questioning, give a history of rheumatic attacks, pain in the epigastrium and left hypochondrium, and periods of weakness and dyspnea which have been separated by years of normal health.

PATHOLOGY

Red blood cells vary from 1,300,000 in a severe active case to 5,000,000 in a latent case. Hemoglobin varies from 25 to 90 per cent. In active cases leucocytes were increased from 11,000 to 64,000. In latent cases there is no leucocytosis.

There is increased blood destruction as evidenced by the pigmentation of the tissues, the presence of bile pigments in the blood and urobilinuria. This is probably dependent on increased hemolytic activity on the part of the spleen. The spleen in all cases showed grave lesions. The hemorrhages and infarcts in the spleen may explain the recurrent attacks of high abdominal pain.

Gall-stones are found in some cases. Extreme splenic atrophy and general signs of increased hemolysis were prominent post-mortem features.

The sickling phenomenon is not constant. A diagnosis can be made from blood-stained smears, although the progressive sickling observed in the fresh blood after 24 hours is the most diagnostic feature.

TREATMENT

General supportive measures give only relief. Splenectomy may prove beneficial in severe cases.

Case 1.—D. F., age 25 years, colored male, native of Florida, admitted to Florida State Hospital November 21, 1928. No history was obtainable. Patient was found lying in bed, semi-conscious. He was poorly developed, undernourished, anemic, and markedly dehydrated. Sclera of both eyes were jaundiced.

*Read before the Leon-Gadsden-Liberty-Wakulla-Jefferson County Medical Society, Chattahoochee, Oct. 9, 1930.

Lungs.—No appreciable dullness, much congestion with coarse and sonorous rales over both lung areas.

Heart.—Rate 82, rhythm good, slightly enlarged in all diameters. Soft systolic murmur heard over mitral area, not transmitted. Blood pressure 120/62.

Extremities.—Few small ulcers on both lower extremities.

Glands.—General glandular enlargement.

Examination of Blood.—White blood corpuscles, 32,000; Hb., 52%; small lymphocytes, 5%; nucleated red cells, 35%; red blood corpuscles, 2,400,000; neutrophils, 89%; eosinophiles, 1%.

Blood Picture.—Marked anisocytosis, marked polychromatophilia with basophilic degeneration. Many elongated sickle-shaped and oat-shaped poikilocytes were found. Progressive sickling was observed in fresh blood after 24 hours.

Wassermann, 2 plus; Kahn, 4 plus.

Urinalysis.—Color, dark amber, albumen, trace; bile, heavy trace; indican, trace; specific gravity, 1.020; sugar, negative; pus, negative; reaction, alkaline; occult blood, trace; casts, many hyaline.

This patient developed broncho-pneumonia and died 60 days after admission.

Case No. 2.—W. B., colored male, age 21 years, native of Florida. Height 5 ft. 6 in.; weight 102 pounds. Admitted to Florida State Hospital August 8, 1930. Family and past history negative.

Patient states that he was sent here for treatment for leg ulcer and undescended testicle.

Physical Findings.—Slight discoloration of sclera. Marked anemia of conjunctiva.

Lungs: Resonant throughout, clear, no rales, breath sounds normal.

Heart: Rate 72, rhythm good, normal size and position, sounds are of good quality, soft systolic murmur over mitral area, not transmitted. Blood pressure, 110/80.

Abdomen: Spleen enlarged and tender.

Extremities: Partially healed leg ulcer (right).

Genito-Urinary: Left testicle undescended; operated Sept. 8, 1930. General glandular enlargement.

Examination of Blood.—White blood corpuscles, 26,000; neutrophils, 81%; eosinophiles, 2%; icterus index was 7.5%, showing a latent jaundice; red blood corpuscles, 1,550,000; small lymphocytes, 12%; Hb., 10%; L. Mono. and Trans., 5%.

Blood Picture.—Very marked anisocytosis and poikilocytosis with polychromatophilia and few normoblasts. Many elongated, oat-shaped sickle cells present. Progressive sickling was observed in fresh blood after 24 hours.

Wassermann, negative; Kahn, negative. C. S. F., negative. Cell count, 5.

Urinalysis.—Color, amber; albumen, trace; bile, trace; specific gravity, 1.010; sugar, negative; indican, trace; reaction, acid; pus cells, few; no casts present.

The observations of the authors do not definitely agree that sickle cell anemia should be reserved for patients with a definite anemia, but consider it as a form of familial hemolytic jaundice.

HOW TO PREVENT THE DEPRESSANT EFFECT OF ETHYL CHLORIDE IN GENERAL ANESTHESIA

M. H. STUART, M.D.,

St. Petersburg.

At a recent meeting of a medical society, I heard a few doctors express such fear of ethyl chloride as a general anesthetic as to say that they would not use it.

Lotheisser reports one death in a study of 2,500 cases; Ware one in 12,436; Seitz one in 16,000; while Miller estimates the average to be one in 13,365. It is safer than chloroform, though not as safe as nitrous oxide or ether.

Ethyl chloride is such a compact, convenient anesthetic for bedside and office work that some way should be worked out whereby its depressant effect might be overcome. During the first few inhalations of it the heart and respiratory rates are increased; but when unconsciousness comes the pulse and respiration should be normal. After the initial stimulation, my plan is to drop on the inhaler enough aromatic spirits of ammonia to anticipate the depressant effect—prevent its occurring—and thus make the anesthetic safer than it would otherwise be.

Whether all of the depressant effect may thus be overcome, I do not know; but as aromatic spirits of ammonia is both a respiratory and heart stimulant, I feel sure that its free use at this stage of the anesthesia will rob ethyl chloride of much of its danger, if not all of it.

Ethyl chloride should be mixed with air; never concentrated, and it should not be given too rapidly.

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MERGER FOR MEDICAL EDUCATION

The incorporation of the New York Post-Graduate Medical School and Hospital into the educational system of Columbia University was announced recently at an annual dinner of the Post-Graduate Faculty Association at the Biltmore Hotel, New York City.

Men prominent in the medical and educational fields, in addresses, hailed the uniting of this oldest institution in the United States devoted solely to teaching post-graduate medicine with a great university which already is a leader in medical education as strengthening the position New York already holds as a world centre of medical research and training.

"It marks another long step forward in the development of provision for medical study and research in the city of New York," according to Dr. Nicholas Murray Butler, president of Colum-

bia. Dr. Arthur F. Chace, president of Post-Graduate, expressed the belief that the medical program being developed under the leadership of Columbia University would make New York City the centre of graduate medical education in this country.

Dr. James F. McKernon, honorary president of the New York Post-Graduate Medical School and Hospital, in announcing the agreement between the institutions, said that it would become effective next July. Its primary purpose is to place all of the post-graduate teaching on a university basis and, by making Post-Graduate an integral part of the Columbia teaching system to make it the centre of a comprehensive program of post-graduate medical instruction.

Provision has been made for the interlocking of the governing bodies of the institutions. Dr. Butler has been elected a member of the corporation and a director of the Post-Graduate Medical School and Hospital and becomes ex-officio president of that institution's medical school. Dr. Chace has been elected president of the Post-Graduate Medical School and Hospital to fill the vacancy caused by the retirement of Dr. McKernon after twenty-five years in that office.

The program has been framed with statesman-like vision of the needs of the profession and of service to mankind. It is anticipated that it will attract physicians from all parts of the world.

PRE-CONVENTION SESSION

The officers and Executive Committee of the Florida Medical Association announce that the annual pre-convention meeting of the officers, committeemen and councilors of the Association will be held February 23, 1931, 12:30 p. m., at the Windsor Hotel, Jacksonville. This pre-convention meeting is for the purpose of discussing plans for the next annual meeting to be held in Orlando in May, as well as other matters pertaining to the Association. The Scientific Program Committee will meet and select papers for the scientific program. Those members desiring to present papers at our next annual meeting should have their applications in the hands of this Committee prior to its meeting. The councilors are expected to present, in writing, their annual reports. This meeting, although not official, is one of the most important events during the year and all officers, committeemen and councilors are urged to attend.

DR. JOHN E. BOYD OF JACKSONVILLE SIGNALLY HONORED

At the annual staff meeting of the Duval County Hospital in Jacksonville, attended by the Duval County Welfare Board and some of the friends of the recipient, a very fine tribute was paid to one of Jacksonville's and Florida's most prominent surgeons, when a splendid oil painting of Dr. John E. Boyd, done by Mrs. E. H. Gordon of Savannah, Georgia, and Boston, Massachusetts, was presented by the medical staff of the hospital to the Duval County Welfare Board to be hung on the walls of the institution.

It was with impressive ceremony that a period of long years of distinguished service was recognized in a fitting manner. Dr. Boyd worked for the Duval County Hospital beginning in 1899 in the early years of its history and his untiring efforts have resulted finally in one of the outstanding hospitals in this part of the country. He served as president of the staff from 1917 to 1925 and retired only after he had accomplished his dreams for the institution and had earned a well-needed rest from executive duties.

The speech of presentation of the painting was made by Dr. J. Knox Simpson who succeeded Dr. Boyd as president. It was accepted on behalf of the Welfare Board by Mr. R. P. Daniel and the unveiling was done by Dr. Boyd's two children, Anna and Robert. Dr. Boyd remains on the staff as consulting surgeon.

SCIENCE RESTORES MALARIA- INFESTED SEAPORT IN ITALY

Once a mosquito-infested territory where no one could live, Ostia, a thriving city fifteen miles from Rome, is now a bathing resort and health center. The story of the restoration of Ostia is told by Eloise Lidden Soper in the February Hygeia.

When Rome was mistress of the world, Ostia was a busy seaport town with a population of 85,000; but with the decline in the agriculture in the district, it became malaria-infested. The city was soon depopulated and the extensive ruins were second to those of Pompeii.

Attempts to repopulate the city were made in the fifteenth century when the Romans built a castle to defend the mouth of the Tiber, but all who went to the city were stricken with malaria. In 1884, the Italian government sent 600 natives of Ravenna to Ostia. These Ravenna people were

(Continued on page 384)

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37 N. W. 1st St.,Miami
Black, Nelson M.,
703 Huntington Bldg.,Miami
Boughton, Herman,
441 Washington Ave., Miami Beach
Buliard, Clifford P.,
2930 N. W. 8th Ave.,Miami
Burch, R. N.,
2827 N. Miami Ave.,Miami
Chambers, Silas E.,
409 Huntington Bldg.,Miami
Chandler, G. E.,
Huntington Bldg.,Miami
Cleghorn, Charles D.,
1109 Huntington Bldg.,Miami
Conger, George D.,
2164 N. W. 28th St.,Miami
Coplan, M. M.,
601 Huntington Bldg.,Miami
Couric, Edmonson S.,
P. O. Box 265Miami
DeBos, Michael P.,
Box 505Miami
DeVore, Etta,
809 Huntington Bldg.,Miami
Dobrin, Max,
Huntington Bldg.,Miami
Dodge, Percy L.,
812 Huntington Bldg.,Miami

Dunaway, Carl E.,
401 Huntington Bldg.,Miami
DuPuis, J. G.,
Lemon CityMiami
Elder, Samuel F.,
Huntington Bldg.,Miami
Elgin, Lee W.,
508 Huntington Bldg.,Miami
Ellis, William H.,
15 N. E. 11th St.,Miami
Flipse, M. J.,
306 Huntington Bldg.,Miami
Fox, H. H.,
Box 601Miami
Foxworthy, F. W.,
911 Huntington Bldg.,Miami
Freeman, MaryPerrine
French, Elmo D.,
603 Huntington Bldg.,Miami
Gherltter, Max,
1715 S. W. 11th St.,Miami
Goodson, W. M.,
315 Olympia Bldg.,Miami
Gowdy, Francis A.,
120 Shoreland ArcadeMiami
Gowdy, Ralph A.,
925 Lincoln Road, Miami Beach
Granger, Gordon A.,
Aladdin Bldg.,Miami Beach
Graves, J. Raymond,
309 Huntington Bldg.,Miami
Grimes, Dewey H.,
Box 377South Miami
Haggard, William A.,
903 Security Bldg.,Miami
Hall, E. J.,
201 Venetian Bldg.,Miami
Hall, John E.,
Box 2722Miami
Hall, Thomas B.,
Aladdin Bldg.,Miami Beach
Harris, David W.,
403 Huntington Bldg.,Miami
Hassell, C. S.,
2028 S. W. 24th Terrace, Miami
Hatch, Ernest B.,
71 N. E. 11th St.,Miami
Heck, Maurice E.,
601 Professional Bldg.,Miami
Hodsdon, Benjamin F.,
418 Security Bldg.,Miami
Hodsdon, L. A.,
418 Security Bldg.,Miami
Holmes, Albert G. H.,
33 N. E. 4th St.,Miami
Holmes, R. J.,
601 Huntington Bldg.,Miami
Hotchkiss, W. T.,
131 Forest Ave., Jamestown, N. Y.
Hutson, Thos. W.,
309 Huntington Bldg.,Miami
Ingersoll, J. M.,
1700 S. Bayshore Lane,Miami
Jaudon, E. K.,
404 N. E. 27th St.,Miami
Jenkins, Leslie M.,
712 Huntington Bldg.,Miami
Jenkins, Paul K.,
604 Fifth St.,Miami Beach
Jones, Walter C., Jr.,
409 Calumet Bldg.,Miami
Keeler, Frank L.,
2772 N. W. 14th St.,Miami
Keely, J.,
161 N. E. 2nd St.,Miami
Kemp, Austin J.,
207 Congress Bldg.,Miami
Kennon, Charles L.,
411 Huntington Bldg.,Miami
Kirsch, Maxwell D.,
408 Huntington Bldg.,Miami
Lanier, W. T.,
19 S. W. 7th Ave.,Miami
Leavitt, H. A.,
127 N. E. 5th St.,Miami
Lefholz, R.,
911 Huntington Bldg.,Miami
Lewis, Taylor,
302 Congress Bldg.,Miami
Lithgow, William D.,
245 N. E. 25th St.,Miami
Litterer, A. Buist,
603 Huntington Bldg.,Miami

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Lowe, Eugene C., 216 N. E. 28th St. Miami	Vinson, Willie J., 400 Ingraham Bldg. Miami	Broadbent, Oliver P., 1022 Park St. Jacksonville	
Lucinian, Joseph II., 404 Huntington Bldg. Miami	Vogt, Ferdinand A., 207 Calumet Bldg. Miami	Bryant, James M., 303 Medical Arts Bldg. Jacksonville	
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Lustgarten, A., 409 Olympia Bldg. Miami	Watters, W. H., Boston-Miami Clinic, Coconut Grove	Carefoot, E. I., Professional Bldg. Jacksonville	
Lyell, Robert O., 305 Huntington Bldg. Miami	Weiland, A. H., 227 Aragon Ave. Coral Gables	Cason, Turner Z., 2033 Riverside Ave. Jacksonville	
MacDonell, George N., care Division of Health. Miami	Welch, P. B., 2203 Alhambra Circle, Coral Gables	Chapman, Benjamin A., 348 St. James Bldg. Jacksonville	
McGunagle, J. E., 1885 W. Flagler St. Miami	Westermann, Julius T., P. O. Box 1542, Buena Vista Sta. Miami	Chilli, Joseph L., 318 St. James Bldg. Jacksonville	
McKenzie, J. S., Rosetta Theatre Bldg. Miami	White, David W., 337 Lincoln Road. Miami Beach	Collins, C. C., St. James Bldg. Jacksonville	
McKibben, William W., 205 Calumet Bldg. Miami	Whitten, Benjamin L., Box 505 Miami	Copeland, Silas M., 203 St. James Bldg. Jacksonville	
Manson, Plumer J., Rosetta Theatre Bldg. Miami	Wilson, M. C., 809 Huntington Bldg. Miami	Copp, F. A., 458 St. James Bldg. Jacksonville	
Marsh, Lucille J., 1001 Bk. of Bay Biscayne Bldg., Miami	Withers, G. H., Aladdin Medical Arts Bldg., Miami Beach	Counts, H. W., 215 Professional Bldg., Jacksonville	
Marshall, L. R. Homestead	Wood, Arthur W., 416 Security Bldg. Miami	Croft, Theo. G., St. James Bldg. Jacksonville	
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Matthien, Joseph, Jackson Memorial Hospital, Miami	Yarbrough, Henry C., 812 N. Biscayne Blvd. Miami	Day, Gaston, St. James Bldg. Jacksonville	
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Nichol, E. Sterling, 306 Huntington Bldg. Miami	DESOTO-HARDEE-HIGHLANDS COUNTY MEDICAL SOCIETY		
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Tumlin, Corbett E., 315 Olympia Bldg. Miami	Boone, James L., 500 Professional Bldg., Jacksonville	Killinger, Raymond R., St. James Bldg. Jacksonville	
	*Bowen, Frederick J., Jacksonville	Kirby-Smith, Joseph L., 511-15 Greenleaf & Crosby Bldg., Jacksonville	
	Boyd, John E., 342 St. James Bldg. Jacksonville	Kirk, William W., 608 Greenleaf & Crosby Bldg., Jacksonville	
	Bransford, L. E., Professional Bldg. Jacksonville	Knauer, W. J., Buckman Bldg. Jacksonville	
	Brillhart, H. L., Graham Bldg. Jacksonville		
	Brink, F. A., Box 4479 Jacksonville		
	Brinson, P. A. Baldwin		

*Deceased.

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452 St. James Bldg. Jacksonville
Limbaugh, Louis M.,
458 St. James Bldg. Jacksonville
Love, J. D. Jacksonville
McEuen, Harry B.,
320 Professional Bldg. Jacksonville
McGinnis, Robert H.,
2063 Oak St. Jacksonville
McIver, Robert B.,
St. James Bldg. Jacksonville
McKenzie, Albert C.,
326 St. James Bldg. Jacksonville
Mabry, C. B.,
St. James Bldg. Jacksonville
Manhoff, Ben,
712 Laura St. Jacksonville
Manning, Wm. Saunders,
St. James Bldg. Jacksonville
Martin, P. H.,
Professional Bldg. Jacksonville
May, Robert D.,
305 Professional Bldg. Jacksonville
Milam, Ernest B.,
1022 Park St. Jacksonville
Mitchell, George M.,
712 Laura St. Jacksonville
Mitchell, John H.,
300 Professional Bldg. Jacksonville
Moe, Leonard N.,
212 St. James Bldg. Jacksonville
Morgan, Thomas E.,
212 Medical Arts Bldg., Jacksonville
Morris, S. A.,
237 W. Duval St. Jacksonville
Norris, Samuel R.,
Medical Arts Bldg. Jacksonville
Norwood, J. K.,
211 St. James Bldg. Jacksonville
Oetjen, G. F.,
St. James Bldg. Jacksonville
Owens, J. H.,
452 St. James Bldg. Jacksonville
Parramore, James B.,
St. James Bldg. Jacksonville
Pasco, J. D.,
1022 Park St. Jacksonville
Peterson, C. A.,
St. James Bldg. Jacksonville
Peyton, Harry A.,
2033 Riverside Ave. Jacksonville
Porter, H. W.,
348 St. James Bldg. Jacksonville
Proctor, Harper L.,
210 Professional Bldg., Jacksonville
Ramage, Raymond B.,
219-20 Professional Bldg.,
Jacksonville
Randolph, J. H.,
St. James Bldg. Jacksonville
Reaves, H. A.,
Professional Bldg. Jacksonville
Richards, Ferdinand,
Professional Bldg. Jacksonville
Richardson, George W.,
343 St. James Bldg. Jacksonville
Richardson, Shaler,
111 W. Adams St. Jacksonville
Rogers, W. W.,
Professional Bldg. Jacksonville
Rollins, Clarence D.,
2162 Riverside Ave. Jacksonville
Ross, W. E.,
St. James Bldg. Jacksonville
Royce, Clayton E.,
Medical Arts Bldg. Jacksonville
Sample, A. M., Jr.,
Riverside Hospital Jacksonville
Sandusky, C. M.,
28 W. Monroe St. Jacksonville
Schnauss, William R.,
312 Hildebrandt Bldg. Jacksonville
Schneider, David,
Greenleaf & Crosby Bldg.,
Jacksonville
Sellers, E. T.,
412-413 St. James Bldg., Jacksonville
Sengstak, Ernst P. E. Mandarin
Simpson, J. Knox,
712 Laura St. Jacksonville
Skipper, C. T.,
St. James Bldg. Jacksonville
Smith, Ralph E.,
211 E. Forsyth St. Jacksonville
Stinson, W. M.,
Gen. Delivery, Hendersonville, N. C.
Stollenwerk, A. D.,
25 W. Beaver St. Jacksonville
Teeter, Edmund H.,
305 St. James Bldg. Jacksonville
Thomas, Robert Y. H.,
502-4-6 Lynch Bldg. Jacksonville

Thompson, David C.,
2579 Herschell St. Jacksonville
Thompson, T. C.,
318 Hildebrandt Bldg., Jacksonville
Tyler, Lockland V.,
San Marco Square, So. Jacksonville
Upchurch, Noble A.,
City Board of Health, Jacksonville
Van Schaick, Harold D.,
210 St. James Bldg. Jacksonville
Veal, Ernest W.,
128 St. Johns Ave. So. Jacksonville
Waas, F. J.,
Professional Bldg. Jacksonville
Washburn, Clayton D.,
St. James Bldg. Jacksonville
Wilcox, Clarence R.,
712 Laura St. Jacksonville
Wilkinson, Albert H.,
313 Professional Bldg. Jacksonville
Wilson, Alpheus K.,
334 St. James Bldg. Jacksonville
Wilson, B. C.,
94 E. 59th St. Jacksonville
Wilson, J. F.,
310-12 Greenleaf & Crosby Bldg.,
Jacksonville
Woolsey, Bertram F.,
320-321 St. James Bldg., Jacksonville
Wynn, Robert S.,
305 Consolidated Bldg.,
West Bay St. Jacksonville

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206 Blount Bldg. Pensacola
Anderson, Warren E.,
511 American Natl. Bk. Bldg.,
Pensacola
Bell, John D.,
305 Blount Bldg. Pensacola
Bickerstaff, James H.,
Blount Bldg. Pensacola
Blackshear, T. E.,
406 Amer. Natl. Bk. Bldg., Pensacola
Bryans, H. L.,
21½ E. Wright St. Pensacola
Bryans, R. L.,
21½ E. Wright St. Pensacola
D'Alemberte, Clinton W.,
302 Amer. Natl. Bk. Bldg., Pensacola
Dewberry, W. C. Pensacola
Dodson, M. W. Munson
Gachet, Neely L. Century
Haisfield, Abram R.,
311 Blount Bldg. Pensacola
Haisfield, H. B.,
311 Blount Bldg. Pensacola
Heinberg, Charles J. Pensacola
Hixon, F. P.,
Blount Bldg. Pensacola
Holley, John C. Milton
Lischkoff, Mozart A.,
Blount Bldg. Pensacola
McLane, J. N. Pensacola
McMillan, D. W. Pensacola
Mixon, J. A.,
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Mock, A. E.,
1504 E. Strong St. Pensacola
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Blount Bldg. Pensacola
Nobles, V. R.,
Blount Bldg. Pensacola
Nobles, W. D.,
Blount Bldg. Pensacola
Payne, W. C.,
Blount Bldg. Pensacola
Peel, George T. Gary, Ind.
Pierpont, J. Harris,
511 Amer. Natl. Bk. Bldg.,
Pensacola
Quina, M. E. Pensacola
Renshaw, F. G.,
104 S. Palafox St. Pensacola
Simpson, Horace L.,
303 Theisen Bldg. Pensacola
Stokes, Thomas H.,
Theisen Bldg. Pensacola
Sullivan, Rosa L.,
1016 W. Chase St. Pensacola
Thames, Rufus Milton
Turberville, John S. Century
Turner, John B. Bagdad
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715 Citizens Bk. Bldg. Tampa
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906 South Rome Tampa
Adamson, William P.,
610 Citizens Bank Bldg. Tampa
Allen, Bundy,
302 Citizens Bk. Bldg. Tampa
Alsobrook, John W.,
120 N. Collins St. Plant City
Baldwin, R. E.,
817 Citizens Bk. Bldg. Tampa
Beyer, A. R.,
Box 474 Tampa
Bidwell, Alfred M.,
401 1st Nat. Bk. Bldg. Tampa
Bitzer, Emory W.,
815 Citizens Bk. Bldg. Tampa
Black, Robert C.,
101 San Ever St. Plant City
Blackman, H. J.,
Citizens Bk. Bldg. Tampa
Blake, W. C.,
412 Citizens Bk. Bldg. Tampa
Boccelato, S. L.,
538 W. Gwinnett Ave.,
San Antonio, Texas
Boling, John R.,
1207 1st Natl. Bk. Bldg. Tampa
Bottari, Giulio C.,
1829½ Seventh Ave. Tampa
Butchart, T. R.,
112 N. Boulevard Tampa
Carlton, Leland F.,
805 Citizens Bk. Bldg. Tampa
Chandler, J. C.,
Citrus Exchange Bldg. Tampa
Cook, George L.,
906 South Rome Ave. Tampa
Cook, H. M.,
309 E. Ross Ave. Tampa
Costa, Frank J.,
Centro Asturiano Hospital, Tampa
Crum, James W.,
412 Schulte-United Bldg. Tampa
Daniels, Benjamin A.,
608 Tampa St. Tampa
Davis, John McM., North, S. C.
Deederer, Carleton,
300 Ingraham Bldg. Miami
Dickinson, Joshua C.,
302 Citizens Bk. Bldg. Tampa
Draper, Arthur D.,
5607 Florida Ave. Tampa
Duke, Roncie R.,
708 Citizens Bk. Bldg. Tampa
Duncan, William P.,
401 Tampa Theatre Bldg. Tampa
Dyer, Walter H.,
1801½ 22nd St. Tampa
Efrd, Lester J.,
509 Stovall Bldg. Tampa
Ely, R. A.,
404½ Zack St. Tampa
Estes, J. L.,
815 1st Natl. Bk. Bldg. Tampa
Etheredge, S. H.,
317 Citizens Bk. Bldg. Tampa
Evans, Harry C.,
Faver, Henry M.,
402 Citrus Exchange Bldg., Tampa
Fluker, Carl B.,
808 Tribune Bldg. Tampa
Forbes, Sherman B.,
409 Citizens Bk. Bldg. Tampa
Foster, John C.,
216 Cass St. Tampa
Gilbert, Elsie,
6508 Central Ave. Tampa
Gilmer, Eugene S.,
612 Citizens Bk. Bldg. Tampa
Golden, Harold M.,
434 Roscoe St. Chicago, Ill.
Grantham, James M.,
242 Lafayette Arcade Tampa
Hardy, G. E. W.,
818 1st Natl. Bk. Bldg. Tampa
Helms, John S.,
Citizens Bank Bldg. Tampa
Helms, John S., Jr.,
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Henderson, R. P.,
803 Citizens Bk. Bldg. Tampa
Higgins, Allen F.,
330 Lafayette Arcade Tampa
Hopkins, Clack D.,
1818 Hills Ave. Tampa
Hubbard, Roscoe C.,
2220 7th Ave. Tampa

Jefferson, Rollin,
518 1st Natl. Bk. Bldg. Tampa
Jenson, Henry J.,
7303 Nebraska Ave. Tampa
Johnson, A. M. C.,
228 Lafayette Arcade Tampa
Knauf, A. R.,
Myelvaron Apts. Tampa
Knight, John C.,
121 N. Collins St. Plant City
Lancaster, William J.,
Box 2856 Tampa
Lassman, George,
227 Audufan Ave. New York, N. Y.
Lowry, Blackburn W.,
408 Citrus Exchange Bldg. Tampa
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McMurray, Henry E.,
211 Carly St. Tampa
McRae, E. H.,
402 Citrus Exchange Bldg. Tampa
Maguire, Thomas C.,
104 S. Collins St. Plant City
Maner, George R.,
5111 Central Ave. Tampa
Martin, Douglas D.,
906 South Rome Ave. Tampa
Martorell, Abelardo,
2405 Valmont New Orleans, La.
Meighen, Douglas G.,
325 Lafayette Arcade. Tampa
Mills, Herbert R.,
706 Franklin St. Tampa
Mills, John H.,
907 17th Ave. Tampa
Mitchell, L. B.,
Box 737 Tampa
Myers, Wade C.,
302 Schulte-United Bldg. Tampa
Nelson, Robert G.,
712 Citizens Bank Bldg. Tampa
Oppenheimer, Louis S.,
408 Citizens Bank Bldg. Tampa
Ortega, Rafael,
1805 15th St. Tampa
Pate, Julien C.,
1107 1st Natl. Bk. Bldg. Tampa
Patterson, William,
313 Citrus Exchange Bldg. Tampa
Pearson, R. J.,
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Rankin, Grover C.,
Box 2233 Tampa
Rowlett, W. M.,
Box 603 Tampa
Saxton, J. J.,
315 Citrus Exchange Bldg. Tampa
Shaver, E. F.,
1801½ 22nd St. Tampa
Smith, Burdette,
411 Citrus Exchange Bldg. Tampa
Smith, H. Mason,
903 Tampa Theatre Bldg. Tampa
Smith, Walton H. Y. Perry
Smock, Edward,
315 Citizens Bank Bldg. Tampa
Spengler, Nathaniel L.,
903 Tampa Theatre Bldg. Tampa
Stone, Alvord L.,
102 E. Hillsboro Tampa
Stringer, Sheldon,
P. O. Box 162 Tampa
Taylor, Joseph W.,
Room 807, 706 Franklin St., Tampa
Torbett, R. S.,
619 Citizens Bank Bldg. Tampa
Truelsen, Thomas,
Room 605, 706 Franklin St. Tampa
Weekley, Augustine S.,
325 Lafayette Arcade. Tampa

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Burns, M. Q. Blountstown
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Fenn, Harry T. Mount Dora

Hannum, M. M. Eustis
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Holland, Howard G.,
202 State Bank Bldg. Leesburg
Izlar, A. L. Clermont
Morrison, Harry K.,
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Hostleman, Ernest,
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Harrison, Warren A.,
Pythian Building. Ft. Myers
Johnson, M. F. Ft. Myers
Jones, J. William Ft. Myers
Longbrake, Guy A.,
308 2nd St. Ft. Myers
Stebbins, A. L. Punta Gorda
Stone, George S.,
2nd and Hendry Ft. Myers

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Kendrick, Odis G., Vice-President,
Tallahassee
Brinson, John B., Jr., Sec'y-Treas.,
Dogwood St. Monticello
Daves, F. E. Chattahoochee
Davis, Julius C.,
203 Masonic Building. Quincy
Dozier, L. L. Tallahassee
Folmar, James Q.,
Fla. State Hospital, Chattahoochee
Gainey, J. G. Quincy
Glover, George B. Monticello
Godard, Robert F.,
Key Building. Quincy
Harrison, A. P.,
Box 277 Tallahassee
Inman, Joseph C., Jr. Chattahoochee
Johnston, John K.,
Exchange Bank Bldg. Tallahassee
Massey, William W.,
Davidson Bldg. Quincy
Miles, W. G. Chattahoochee
Moor, F. Clifton,
Telephone Bldg. Tallahassee
Morrow, J. S. Apalachicola
Palmer, Henry E.,
408 South Adams St. Tallahassee
Pound, J. H. Chattahoochee
Rhodes, Bricey M.,
121 E. College Ave. Tallahassee
Walker, William H. Lamont
Weems, George E. Apalachicola
Wilhoit, Sterling E. Quincy
Wilkinson, B. A.,
Telephone Building Tallahassee
Williams, J. F. Monticello

MADISON COUNTY MEDICAL SOCIETY

Davis, George O., Sec'y-Treas., Madison
Long, E. Madison

MANATEE COUNTY MEDICAL SOCIETY

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Brown, J. O., Vice-Pres. Palmetto
English, A. Q., Sec'y-Treas. Palmetto
Blake, Lowrie W. Bradenton
Bryan, Clarence H.,
Dixie Grande Hotel Bradenton
Clark, George T. Bradenton
Gates, Hubbard,
P. O. Box 245 Bradenton
Harrison, M. M. Bradenton
Hollingsworth, Samuel G.,
451 12th St. Bradenton
Larrabee, Charles W.,
Larrabee Hospital Bradenton
McDuffee, Toliver M. Manatee
Mason, John F. Bradenton

MARION COUNTY MEDICAL SOCIETY

Ferguson, R. D., President,
Box 802 Ocala
Lindner, E. G., Vice-President. Ocala

Wallis, Thomas H., Sec'y-Treas.,
104 S. Magnolia St. Ocala
Baskin, J. G. Dunnellon
Chalker, James L.,
Masters Building Ocala
Clark, William B.,
1707 Pere Marquette Bldg.,
New Orleans, La.
Curry, J. F. Dunnellon
Dozier, Henry C.,
9 North Magnolia St. Ocala
Freeman, Albert H.,
Holder Block Ocala
Hood, J. W. Ocala
Laffitte, L. Sydnor Gulf Hammock
Lane, W. K. Ocala
Lisk, Percy F. Ft. McCoy
Moore, J. N.,
210 Professional Bldg. Ocala
Peek, Eugene G.,
104 S. Magnolia St. Ocala
Slaughter, T. K. Oxford
Strange, J. L. McIntosh
Strickland, Edgar E. Citra
Stutts, Baldwin S.,
Anderson Bldg. Dunnellon
Turner, Smith L. Williston
Van Engelken, Louis H. Ocala
Watt, Harry F.,
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532 Fleming St. Key West
Plummer, George, Vice-President,
504 Simonton St. Key West
Warren, William R., Sec'y-Treas.,
511 Eaton St. Key West

ORANGE COUNTY MEDICAL SOCIETY

Spiers, William H., President,
209 Clinic Bldg. Orlando
Mallory, Meredith, Vice-Pres.,
Box 1011 Orlando
Chappell, John R., Sec'y,
Box 1370 Orlando
Collins, Charles J., Treas.,
209-212 Exchange Bldg. Orlando
Andrews, Laurin L.,
Orange Clinic,
18 Lucerne Circle Orlando
Andrews, Mitchell M.,
Box 1817 Orlando
Ashley, K. C.,
Orlando Sanitarium. Orlando
Beardall, Harold M.,
147 E. Church St. Orlando
Brinson, H. Kissimmee
Burks, B. Auxford, Winter Park
Butler, Paul T.,
314 State Bank Bldg. Orlando
Carroll, C. Apopka
Chiles, J. H.,
Box 943 Orlando
Christ, Calvin D.,
Box 1137 Orlando
Coffin, C. E.,
336 Interlachen Ave. Winter Park
Craney, Edward T.,
Box 1782 Orlando
Day, Horace A.,
209-212 Exchange Bldg. Orlando
Dodds, William H.,
11th St. & Penn. Ave. St. Cloud
Edwards, Gaston H.,
Clinic Bldg. Orlando
Folsom, Spencer A.,
11 Lucerne Circle Orlando
Gardner, J. F. Winter Park
Geiger, Hugh St. C.,
24½ Broadway Kissimmee
Gray, Frank D.,
311-12 Exchange Bldg. Orlando
Gwynn, Humphrey W.,
Clinic Bldg. Orlando
Harms, F. H.,
40 N. Orange St. Orlando
Hoffman, Carl D.,
25-27 Autrey Arcade Orlando
Hotard, Roland F.,
226 E. Park Ave. Winter Park
Ingram, L. C.,
Box 1711 Orlando
Johnston, Colonel G.,
Box 272 Orlando
Johnston, Hewitt,
11 Lucerne Circle Orlando
Jones, Allan,
Orange Clinic Orlando
Lawson, Ben H. Winter Garden
Lewis, P. M.,
Rose Building Orlando

McBride, Thomas E.Apopka
McElroy, Sylvan,
248 S. Orange Ave.Orlando
McEwan, John S.,
Clinic BuildingOrlando
Marshall, C. J.Sanford
Morton, B. Rosalie Slaughter,
Winter Park
Neal, Thomas A.,
Box 321Orlando
Oertel, H. B.,
1415 E. Colonial Drive....Orlando
Orr, Louis McL., Jr.,
311 Exchange Bldg.Orlando
Osineup, Gilbert S.,
300 E. Colonial DriveOrlando
Perkins, Herman,
3001 Kings RoadJacksonville
Person, W. C.,
P. O. Box 571Orlando
Pines, John A.,
Orlando ClinicOrlando
Redding, John L.,
126 S. Orange St.Orlando
Rivers, Thomas M.Kissimmee
Shoemaker, Samuel A.,
30 East Church St.Orlando
Sinclair, W. E.,
Clinic BuildingOrlando
Westcott, William E.,
Midway PharmacyOrlando
White, Roland T.,
211 S. Rosalind Ave.Orlando
Wood, Will L.Mount Dora

PALM BEACH COUNTY MEDICAL SOCIETY

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901 Harvey Bldg., West Palm Beach
Netto, Lloyd J., Vice-Pres.,
415 Comeau Bldg., West Palm Beach
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Guaranty Bldg., West Palm Beach
Papot, Grace E., Treas.,
310 Comeau Bldg., West Palm Beach
Arnold, Wilbur O.,
Box 1735West Palm Beach
Baldwin, R. Henry,
309 Harvey Bldg., West Palm Beach
Binklev, John F.,
1206 Harvey Bldg., West Palm Beach
Blair, William M.,
424 Comeau Bldg., West Palm Beach
Brantley, Grady H.,
P. O. Box 336Lake Worth
Carlisle, J. L.,
307 Harvey Bldg., West Palm Beach
Clay, B. S.,
1203 Harvey Bldg., West Palm Beach
Cooley, Roy O.,
Box 1735West Palm Beach
Creel, Charles E.Pahokee
Dawson, George M.,
P. O. Box 1836, West Palm Beach
Denison, Raymond C.,
117 N. "J" St.Lake Worth
Fleming, Samuel W.,
417 Harvey Bldg., West Palm Beach
George, William W.,
1116 Harvey Bldg., West Palm Beach
Gerlach, Earl B.St. Mary's, W. Va.
Gill, Richard S.Hopewell, Va.
Gunter, T. D.,
Box 85West Palm Beach
Heath, Guy W.,
409-11 Harvey Bldg., W. Palm Beach
Henry Gordon F.,
Box 355West Palm Beach
Herman, F. Peter,
1007 Harvey Bldg., W. Palm Beach
Herpel, Frederick K.,
Box 1057West Palm Beach
Jared, Vernon M.,
Box 1956West Palm Beach
Moorefield, J. L.Deerfield
Newton, S. B.,
1750 Que St.Washington, D. C.
Oughterson, William A.,
West Palm Beach
Peek, Leon A.,
119 S. Narcissus St., W. Palm Beach
Peery, E. W.,
524 Comeau Bldg., West Palm Beach
Pittman, J. H.West Palm Beach
Fowell, J. A.,
Box 561West Palm Beach
Rozier, Lauchlin McK.,
411 Comeau Bldg., West Palm Beach
Sayad, William Y.,
1215 Harvey Bldg., W. Palm Beach
Schiffli, O. F.,
507 S. Poinsettia Drive,
West Palm Beach
Shackelford, C. W.West Palm Beach
Shackelford, W. L.West Palm Beach

Sory, B. B., Jr.Lake Worth
Spooner, D. S.Pahokee
Wilber, A. Boynton,
203 Seaview Ave.Palm Beach

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Creekmore, George R., Secy-Treas.,
112 N. Main St.Brooksville
Bradshaw, J. T.Lake Jovita
Cannon, Augustus B.Lacoochee
Dame, George A.,
241 Main St.Inverness
Furlow, L. T.Brooksville
Hancock, William S., Jr.,
New Port Richey
*Miller, J. F.Inverness
Mills, David A.Zephyrhills
Moon, William B.Crystal River
Sistrunk, Robert D.Dade City

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Power & Light Bldg., St. Petersburg
Feaster, Orion O., Secretary,
Power & Light Bldg., St. Petersburg
Post, William G.; Jr., Treasurer,
Power & Light Bldg., St. Petersburg
Albaugh, Andrew P.Tarpon Springs
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Florida Natl. Bank Bldg.,
St. Petersburg
Anderson, William D.,
Box 53Largo
Bieker, Annette M.,
Power & Light Bldg., St. Petersburg
Black, M. Eldridge,
311 Coachman Bldg., Clearwater
Bowen, J. T.Clearwater
Brown, Harold O.,
Coachman Bldg., Clearwater
Bucknell, Howard, Upper Saranac, N. Y.
Burnette, Elmer W.,
1st Natl. Bank Bldg., Tarpon Springs
Cooper, J. H.,
First Natl. Bank Bldg.,
St. Petersburg
Cranford, J. F.,
512 First Natl. Bank Bldg.,
St. Petersburg
Davies, RayLos Angeles, Calif.
Davis, W. M.,
342 1st Ave., N.St. Petersburg
Dawson, S. A.,
870 7th Ave., N.St. Petersburg
Dickerson, Lucien B.,
Williamson Bldg., Clearwater
Echard, T. B.Connellsville, Pa.
Fisk, Harley B.,
U. S. Veterans Bureau,
New Orleans, La.
Funk, Neil E.,
401 First Natl. Bank Bldg.,
St. Petersburg
Gable, Nonie Wilson,
Health Dept. 175 5th St., N.,
St. Petersburg
Gable, Nonie Worth,
807 First Natl. Bank Bldg.,
St. Petersburg
Green, T. H.Knoxville, Tenn.
Griffin, Thomas R.,
Power & Light Bldg., St. Petersburg
Groves, W. H.Clearwater
Harden, W. W.,
814 First Natl. Bank Bldg.,
St. Petersburg
Hardenbergh, John A.,
Sta. A, Box 305.St. Petersburg
Heibner, Eugene A.,
Power & Light Bldg., St. Petersburg
Herring, John A.,
350 3rd Ave., N.St. Petersburg
Hooper, C. A.,
200 4th St., N.St. Petersburg
Horne, Lester W.,
Power & Light Bldg., St. Petersburg
Jennings, Frank S.,
149 2nd St., North.St. Petersburg
Kaufman, Frank E.,
Coachman Bldg., Clearwater
Knowlton, R. H.,
Power & Light Bldg., St. Petersburg
Lambdin, L.,
Box 1805St. Petersburg
Langley, Francis H.,
614 Times Bldg., St. Petersburg

LeBreton, Prescott,
Amer. Legion Hosp., St. Petersburg
Leith, Richard B.,
201 Snell Bldg., St. Petersburg
Lochner, G. M.,
1st Natl. Bank Bldg., St. Petersburg
Lustig, Emil,
500 7th Ave., N.St. Petersburg
*McCallister, Archie.Tarpon Springs
McConnell, Whitman C.,
204 Snell Bldg., St. Petersburg
MacCordy, Earl C.,
1335 9th St., N.St. Petersburg
Marr, Norval M.,
812 Power & Light Bldg.,
St. Petersburg
Meare, John A., Jr.,
Virginia Ave.Dunedin
Melville, Edmond J.,
335 Third Ave., N.St. Petersburg
Mighell, Norman E.Clearwater
Miller, George E.,
Equitable Bldg., St. Petersburg
Mills, A. L.,
814 First Natl. Bank Bldg.,
St. Petersburg
Moeller, Maximilian W.,
535 1st Ave., N.St. Petersburg
Morgan, William E.Tarpon Springs
Murphy, Ralph D.,
Box 82St. Petersburg
Nettles, Robbins,
402 Coachman Bldg., Clearwater
Nickle, Millen A.,
503 Coachman Bldg., Clearwater
Osgood, G. E.,
2804 4th St., S.St. Petersburg
Peabody, J. D.,
456 3rd St., N.St. Petersburg
Pease, Charles W.,
State Board of Health Bldg., Tampa
Prather, B. T.,
1st Natl. Bank Bldg., St. Petersburg
Putnam, Harry L.,
1027 17th Ave., N.St. Petersburg
Quicksall, William E.,
222 Taylor Arcade.St. Petersburg
Remington, Alvah C.,
304 West Ave., Rochester, N. Y.
Rieger, O. Paul,
care Weirton Steel Co.,
Weirton, W. Va.
Roush, Franklin W.,
Power & Light Bldg., St. Petersburg
Rudolph, Council C.,
512 Power Bldg., St. Petersburg
Ruff, Joseph F.,
Bank of Clearwater Bldg.,
Clearwater
Sackett, Harry R.,
1027 15th Ave., N.St. Petersburg
Simcox, Lawrence,
235 4th Ave., N.St. Petersburg
Solomon, H. D.,
Power & Light Bldg., St. Petersburg
Strickland, Jesse A.,
712 Power & Light Bldg.,
St. Petersburg
Stuart, M. H.,
814 First Natl. Bank Bldg.,
St. Petersburg
Timberlake, Gideon,
6th Floor Times Bldg.,
St. Petersburg
Wade, Hugh W.,
512 Fla. Power Bldg., St. Petersburg
White, Benjamin L.,
202 First Natl. Bank Bldg.,
St. Petersburg
Whitford, Grace R.Ozona
Williams, Carl A.,
Box 975St. Petersburg
Wood, Alvin J.,
801 First Natl. Bank Bldg.,
St. Petersburg
Wylie, LeRoy A.,
210 Medical Arts Bldg.,
St. Petersburg

POLK COUNTY MEDICAL SOCIETY

Wilhoite, Roy E., President, Lake Wales
Sherman, William E., Vice-Pres.,
716 W. Central Ave., Winter Haven
Watson, Herman, Secy-Treas.,
P. O. Box 944.Lakeland
Alexander, Omer R.,
Rooms 25 and 26, Beymer Bldg.,
Winter Haven
Besenbruch, Peter W.,
Orange St.Davenport
Biddle, Percy D.,
309 E. 49th St., care Midtown
HospitalNew York, N. Y.
Boulware, James,
Box 367Lakeland

Carefoot, G. H. Ft. Meade
 Causey, Thomas W., Lakeland
 307 Marble Arcade
 Clark, Samuel A.,
 802 Marble Arcade Bldg., Lakeland
 Cline, R. L.,
 P. O. Box 462 Lakeland
 Cordes, Henry B., Jr.,
 P. O. Box 84 Frostproof
 Deal, Charles C.,
 208 Bank Bldg. Auburndale
 Edwards, W. E. Polk City
 Elder, Eugene B.,
 Knoxville General Hospital,
 Knoxville, Tenn.
 Epling, Brady D., Lake Wales
 Farmer, Charles H.,
 Infants' & Children's Sanitarium,
 Saluda, N. Car.
 Freeman, Grover C.,
 P. O. Box 1202 Lakeland
 Gilbert, R. E.,
 19 Postal Arcade Winter Haven
 Gilchrist, J. G.,
 Box 744 Bartow
 Griffin, J. D.,
 203 Hartzell Lakeland
 Gyland, Stephen P., Brewster
 Hargrove, Julian L.,
 Polk County Hospital Bartow
 Horton, Waldo,
 539 Ave. B., N. W. Winter Haven
 Hughes, Robert L.,
 225 E. Main St. Bartow
 Irons, F. E., Winter Haven
 Koon, Alpheus C.,
 513 W. Lemon St. Lakeland
 Lester, John G.,
 P. O. Box 548 Lakeland
 Lindsey, Sherrod A., Fort Meade
 Lowry, J. R., Nichols
 McKnight, George S.,
 Jacaranda Arcade Avon Park
 McMurray, E. R.,
 655 Wilson Ave. Bartow
 Martin, Emmett E.,
 152 7th St. Haines City
 Mooty, Ross H., Winter Haven
 Murphy, C. H., Bartow
 Murphy, H. K.,
 Polk and Main Sts. Mulberry
 Newman, Heber P., Bartow
 Overstreet, George C.,
 Marble Arcade Lakeland
 Pearce, C. C., Mulberry
 Pennington, B. Y., Lake Wales
 Ragsdale, Velpau H.,
 A. A. C. Co. Hospital Pierce
 Richards, H. Mercer,
 Box 72 Lakeland
 Roberts, Tenney H.,
 328 N. Florida Ave. Lakeland
 Shafer, W. W., Haines City
 Simmons, Thomas G.,
 Corlett Bldg. Auburndale
 Simpson, W. T., Winter Haven
 Smith, Samuel F.,
 Box 628 Lakeland
 Stetson, A. G. C., Lakeland
 941 S. Success Ave.
 Sullivan, Raleigh R.,
 1006 Marble Arcade Bldg., Lakeland
 Tillis, W. L.,
 215 Marble Arcade Bldg. ... Lakeland
 Vassar, T. D.,
 Strand Bldg. Lakeland
 Weed, Walter A.,
 Morrell Memorial Hospital, Lakeland
 Williams, E. L., Ft. Meade
 Wilson, Cecil H.,
 270 W. 84th St. New York, N. Y.
 Wilson, John F., Jr.,
 P. O. Box 254 Lakeland

PUTNAM COUNTY MEDICAL SOCIETY

Warren, Edmund W., Secy-Treas.,
 Palatka
 Brantley, Z., Grandin
 Ford, Edward W., Crescent City
 Miller, W. S., Palatka
 Rosborough, D. Y., Palatka
 Strong, S. B.,
 Prado 98 Havana, Cuba
 *Woerner, Lydia Interlachen

ST. JOHNS COUNTY MEDICAL SOCIETY

Estes, Edgar S., President,
 305-9 1st National Bank Bldg.,
 St. Augustine
 Stanton, Gordon, Vice-Pres. Hastings
 Walkup, A. Clark, Secy.,
 116 St. George St. St. Augustine

White, Herbert E., Treas.,
 401-5 1st National Bank Bldg.,
 St. Augustine
 Britt, Reddin,
 Box 1226 St. Augustine
 Irwin, J. M., St. Augustine
 Lockwood, Vernon A.,
 East Coast Hospital, ... St. Augustine
 Potter, George W.,
 East Coast Hospital, ... St. Augustine
 Scruggs, S. A., St. Augustine
 Walton, Milton, Hastings
 Webb, Walter D.,
 Alcazar Hotel St. Augustine
 *Worley, S. G., St. Augustine

ST. LUCIE-OKEECHOBEE-INDIAN RIVER-MARTIN COUNTY MEDICAL SOCIETY

Newnam, J. A., President, Stuart
 Clark, H. D., Vice-Pres.,
 Ft. Pierce Bank & Trust Bldg.,
 Ft. Pierce
 Davis, Claude L., Secy-Treas.,
 Okeechobee
 Boothe, R. C., Ft. Pierce
 Council, Melton D.,
 Arcade Bldg. Ft. Pierce
 Glidden, C. H., Ft. Pierce
 Hardie, Grover C.,
 134½ N. 2nd St. Ft. Pierce
 Harrell, G. L., Vero Beach
 McDermid, Hody C., Okeechobee
 Parker, J. D., Stuart
 Whiddon, Lester L.,
 200-201 Peacock Bldg. Ft. Pierce

SARASOTA COUNTY MEDICAL SOCIETY

Taylor, T. W., President,
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 Patterson, John C., Vice-Pres.,
 Palmer Natl. Bank Bldg. Sarasota
 Metzger, Frank C., Secy-Treas.,
 224 Commercial Court, ... Sarasota
 Cribbins, Orville H.,
 224 Commercial Court, ... Sarasota
 Halton, Jos.,
 Pineapple Ave. Sarasota
 Harris, J. E.,
 224 Commercial Court, ... Sarasota
 Johnston, W. J.,
 215 Commercial Court, ... Sarasota
 Kennedy, David R.,
 1st Bank & Trust Bldg. Sarasota
 Morton, Arthur O.,
 Commercial Court Sarasota
 Myers, Nicholas P., Dowling Park
 Wilson, Cullen B.,
 1st Trust & Bank Bldg. Sarasota

SEMINOLE COUNTY MEDICAL SOCIETY

Langley, W. T., President,
 Meisch Bldg. Sanford
 Smith, Henry D., Vice-Pres.,
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 Denton, John T., Secy-Treas.,
 Meisch Bldg. Sanford
 Knox, A. W.,
 Masonic Temple Sanford
 Martin, John W.,
 Box 95 Oviedo
 Mitchell, Clifford M., Sanford
 Park, Charles L.,
 515-16 1st Natl. Bank Bldg., Sanford
 Puleston, Samuel,
 Brumley Puleston Bldg. Sanford
 Selman, G. S.,
 Lake View Ave. Sanford
 Stevens, Ralph E.,
 U. S. Veterans' Bureau, Jacksonville
 Tolar, Julian N.,
 First Street Sanford

SUMTER COUNTY MEDICAL SOCIETY

Mitchell, W. E., Secy-Treas.,
 P. O. Box 237 Coleman
 Albritton, Andrew B., Wildwood
 Wood, S. C., Leesburg

SUWANNEE COUNTY MEDICAL SOCIETY

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 106 W. Howard St. Live Oak
 Price, Joshua M., Vice-Pres.,
 Alemar Bldg. Live Oak
 White, W. C., Secy-Treas.,
 412 S. Ohio Ave. Live Oak
 Dicks, Reid E.,
 Box 104, 22nd St. Station,
 St. Petersburg
 Strickland, Henry M., Live Oak

TAYLOR COUNTY MEDICAL SOCIETY

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 308 W. 102nd St., New York, N. Y.
 Greene, Ralph J., Secy-Treas. Perry
 Baker, W. J., Foley
 Bryan, W. H., Seaulon
 Ellis, John C., Perry
 Warren, George H.,
 Main St. Perry

VOLUSIA COUNTY MEDICAL SOCIETY

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 111 Palmetto St. New Smyrna
 West, Hugh, Vice-Pres., DeLand
 Wells, J. Ralston, Secy-Treas.,
 Woolworth Bldg. Daytona Beach
 Bohannon, Clyde C.,
 154 1st Ave. Daytona Beach
 Bouchelle, Louis B., New Smyrna
 Brown, L. V. L., DeLand
 Carter, Emory A.,
 Dreka Bldg. DeLand
 Chandler, J. R.,
 213 Orange Ave. Daytona Beach
 Clemmer, Charles A.,
 Box 3236 Daytona Beach
 Davis, C. W.,
 231 Coates St. Daytona Beach
 Davis, George A.,
 Dreka Bldg. DeLand
 Davis, Joseph B.,
 Halifax District Hospital,
 Daytona Beach
 Dillard, T. H., DeLand
 *Dubois, Henry K., Port Orange
 Esche, J. P.,
 315 S. Penn. Drive, ... Daytona Beach
 Farmer, Myron H.,
 Box 274 Atlanta, Ga.
 Fogarty, Joseph N.,
 220 Magnolia Ave. ... Daytona Beach
 Forster, Davis, New Smyrna
 Genge, Victor P., Daytona Beach
 Glatzau, L. W.,
 604 Professional Bldg., Jacksonville
 Green, George M.,
 102¼ S. Beach, ... Daytona Beach
 Henry, H. W.,
 205 State Bank Bldg., New Smyrna
 Howe, Raymond,
 229 N. Ridgewood Ave.,
 Daytona Beach
 Howe, Roy,
 222 Volusia Ave. Daytona Beach
 Johnson, Harry D.,
 350 S. Palmetto Ave., Daytona Beach
 Merryday, H. L., Daytona Beach
 Miller, B. E.,
 412 Canal St. New Smyrna
 Miller, R. L.,
 258½ S. Beach St., Daytona Beach
 Munson, Albert S.,
 110 S. Boulevard DeLand
 Myres, M. J.,
 Room 5 P. O. Bldg., Daytona Beach
 Pay, W. C.,
 221 W. Rich Ave. DeLand
 Rawlings, James E.,
 221 Orange Ave. Daytona Beach
 Rutter, Joseph H.,
 110 S. Palmetto Ave., Daytona Beach
 Taylor, Joseph E., DeLand
 White, J. Blake, Ormond Beach

WALTON-OKALOOSA COUNTY MEDICAL SOCIETY

Webb, Edward P., President,
 City Pharmacy Crestview
 Spires, Ralph B., Vice-Pres.,
 DeFuniak Springs
 Williams, A. G., Secy-Treas., Lakewood
 Huggins, E. L., Freeport
 McGriff, W. F., Niceville
 McGuire, J. J., DeFuniak Springs
 McSweeney, J. C., DeFuniak Springs
 Spires, G. W., Darlington
 Stephens, S. E., Laurel Hill

WASHINGTON-HOLMES COUNTY MEDICAL SOCIETY

Coleman, W. E., President, Chipley
 McClure, Herbert A., Secy-Treas.,
 State Board of Health Bldg.,
 Tallahassee
 Dawkins, N. J., Vernon
 Harper, C. W., Chipley
 Paul, L. H., Bonifay

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familiar with swamp country and they proved to be a great benefit to the agriculture, though their efforts had little effect on the malaria. Many of them perished.

After the discovery of the mosquito as the carrier of malaria, the swamps were drained and Ostia again became habitable. Today Italians go there for their health's sake and have no fear of malaria.

STATE NEWS ITEMS

Dr. Herbert Caldwell, who has been connected with the United States Veterans' Hospital at Lake City, left for Chicago recently, having been transferred as chief of the medical service in the United States Veterans' Hospital there.

* * *

Dr. W. Grady Page recently moved to Jacksonville from New York City where he was for two years House Surgeon at the New York Eye and Ear Infirmary. Dr. Page will be associated with Dr. Marshall Taylor and Dr. Shaler Richardson at 111 West Adams Street.

* * *

Open competitive examinations for Medical Officer, Associate and Assistant Medical Officers, General Medicine and Surgery, for filling vacancies occurring in the Federal classified civil service throughout the United States, unless it is found in the interest of the service to fill any vacancy by reinstatement, transfer or promotion, have been announced. Entrance salaries for these positions are: Medical Officer, \$3,800 a year; Associate Medical Officer, \$3,200 a year; Assistant Medical Officer, \$2,600 a year. If you are interested, correspond with the United States Civil Service Commission at Washington, D. C. Applications will be received until June 30, 1931.

* * *

The new twelve-story addition to the New York Polyclinic Medical School and Hospital, constructed during the past year at a cost of more than \$1,500,000, was formally opened December 29th. Seven floors are to be devoted to clinics and four to be for use of private patients. There are more than 350 physicians and surgeons on the staff of the institution.

* * *

Dr. Robert M. Faver, formerly of Lake Geneva, Florida, is serving as house surgeon at E. E. N. & T. Hospital, Memphis, Tennessee, spending some time in eye clinic and in ear, nose and throat clinic. Dr. Faver expects to complete his work in July of this year.

The following officers of the Good Samaritan Hospital Staff, West Palm Beach, were elected for the ensuing year recently:

Dr. R. O. Cooley, Chief of Staff.

Dr. W. O. Arnold, Secretary of Staff.

Dr. W. W. George, Chief, Medical Division.

Dr. G. M. Dawson, Chief, Surgical Division.

Dr. Fred K. Herpel, Chief, Laboratory Division.

* * *

Dr. H. E. Palmer of Tallahassee recently addressed the Tallahassee Kiwanis Club, describing many historical and interesting parts of Cuba. Dr. Palmer recently returned from a trip in Cuba.

* * *

The newly elected officers for the Hillsboro County Medical Society are as follows:

President—Dr. C. A. Andrews.

Vice-President—Dr. George L. Cook.

Secretary-Treasurer—Dr. J. T. Cowart.

Delegates to House of Delegates—Dr. W. C.

Blake, Dr. A. M. C. Jobson, Dr. Bundy Allen,

Dr. R. P. Henderson, Dr. B. W. Lowry.

* * *

Dr. Julius C. Davis of Quincy recently visited Tallahassee, Lake City and Jacksonville in connection with his duties as president of the Association.

* * *

Dr. W. N. Parkinson, formerly chief surgeon of the East Coast Hospital at St. Augustine and now dean of the Medical School of Temple University, Philadelphia, recently visited the hospital at St. Augustine and friends in that city.

* * *

Dr. T. Z. Cason of Jacksonville recently attended a meeting of the Florida Health Council at Haines City.

* * *

Dr. Louie L. Williams, Jr., of the United States Public Health Service, Washington, malaria expert, recently visited Jacksonville en route to Miami, where he attended the annual meeting of the Southeastern Food and Drug Officials Association.

* * *

Dr. G. H. Edwards of Orlando was re-elected to membership on the Orlando Utilities Commission for a term of four years. Dr. Edwards is chairman of the commission for 1931.

* * *

Dr. Carleton Deederer has moved from Tampa to 300 Ingraham Building, Miami.

The regular meeting of the Pinellas County Medical Society was held Friday, January the 30th, at 8 p. m. One of the papers read and discussed was on "Diagnosis and Treatment of Tuberculosis", by Dr. F. F. Kumm. The meeting was very well attended.

* * *

The home of Dr. and Mrs. F. Clifton Moor, Tallahassee, was badly damaged by fire recently. The upper floor was badly burned and the lower floor was severely damaged by smoke and water. Mrs. Moor and her mother were carried out of the upper story windows by firemen. No information has been received as to the origin of the conflagration.

* * *

Dr. John R. Richardson, Perry, is now located at the Polyclinic Hospital, New York City, where he is taking a two-year course in eye, ear, nose and throat.

* * *

The annual banquet of the Pasco-Hernando-Citrus County Medical Society was held Tuesday evening, January 13th, at the Gray Moss Inn, Dade City. A three-course turkey dinner was served, during which time the guests were entertained by orchestra music, readings and dances. Guests from Hillsboro County Medical Society were the president, Dr. C. A. Andrews, the secretary, Dr. J. T. Cowart, and Dr. W. C. Blake. Thirty members and guests were present and a very interesting and helpful meeting was enjoyed. The fact that thirty were present is an indication of the growing interest in this society. The next meeting will be with Dr. J. T. Bradshaw of St. Lee.

* * *

At the regular monthly meeting of the Marion County Medical Society held January 22nd at Ocala, the following officers were elected for 1931:

President—Dr. E. G. Lindner, Ocala.

Vice-President—Dr. J. N. Moore, Ocala.

Secretary-Treasurer—Dr. T. H. Wallis, Ocala.

Delegate, House of Delegates, State Convention—Dr. E. G. Peek, Ocala.

Alternate—Dr. H. C. Dozier, Ocala.

Board of Censors:

Dr. A. H. Freeman, Ocala, three years.

Dr. E. G. Peek, Ocala, two years.

Dr. H. C. Dozier, Ocala, one year.

CONVENTION NEWS.—The Orange County Medical Society membership has been divided into groups to handle various features of the coming convention in May and it is not only their hope but their expectation that there will be a large number at Orlando to enjoy their hospitality.

* * *

Dr. Ralph Greene, Jacksonville, addressed the Masonic Club weekly luncheon recently on the subject, "The Value of Aviation to Medical Science." The meeting was held at the Mayflower Hotel. Dr. Greene, who is a licensed airplane pilot, said the examinations for pilots proved that few are physically qualified to pass the government tests and stressed the importance of keeping physically fit if one expects to compete in any line of endeavor. The program was directed by Dr. Robert Baker and Dr. Edmund H. Teeter. It was Doctor's Day and some twenty-five medical men were present. Mrs. T. G. Croft, wife of Dr. Croft, rendered several vocal selections.

* * *

Eligibles are needed to fill the following medical officer positions:

Acting assistant surgeon, United States Public Health Service, Galveston, Texas, \$3,800 a year.

Acting assistant surgeon qualified in trachoma work, United States Public Health Service, Ellis Island, N. Y., \$3,000 a year.

Acting assistant surgeon for work in pathology, United States Public Health Service, Ellis Island, N. Y., \$3,600 a year.

Medical officer qualified in neuropsychiatry, Veterans' Bureau, San Francisco, Calif., \$3,800 a year.

Full information may be obtained by addressing the United States Civil Service Commission, Washington, D. C.

* * *

The Fifteenth Annual Clinical Session of the American College of Physicians will convene in Baltimore, Maryland, March 23-27, and in Washington, D. C., March 28, 1931. The organization holds this Session in Baltimore through the cordial invitation of the Johns Hopkins University School of Medicine, the University of Maryland School of Medicine, the Medical and Chirurgical Faculty of the State of Maryland, the Baltimore City Medical Society, and the further cooperative interest manifested by the various Baltimore hospitals and civic societies. Held in important medical centers, these Clinical Sessions constitute,

perhaps, the most important post-graduate week in Internal Medicine each year. Those who attend the meeting will find ample in the way of clinical, laboratory, research and historical interest, well to repay them for the time spent in making the journey. Dr. Sydney R. Miller, of Baltimore, President of the American College of Physicians, has prepared the program for the General Scientific sessions, while Dr. Maurice C. Pincoffs, General Chairman, also of Baltimore, has arranged the program of clinics, demonstration, entertainment, etc.

* * *

At the last annual meeting of the Duval County Welfare Board and the Duval County Hospital staff, Jacksonville, a portrait of Dr. John E. Boyd, for many years president of the hospital staff, was presented to the hospital by the medical staff. For many years Dr. Boyd has worked untiringly to develop this institution and it was in recognition of this service that the staff wished to place his portrait in the halls of the institution.

* * *

The American Association for the Study of Goiter again offers an award of three hundred dollars (\$300.00) for the best essay based upon original research work on any phase of goiter presented at their annual meeting in Kansas City, Mo., April 7th, 8th and 9th, 1931. It is hoped this offer will stimulate valuable research work, especially in regard to the basic cause of goiter. Competing manuscripts must be in the hands of the Corresponding Secretary, J. R. Yung, M.D., Terre Haute, not later than April 1, 1931, to permit the award committee sufficient time to examine all data. Manuscripts arriving after this date will be held for the next year or returned at the author's request. First award of the 1930 annual meeting held in Seattle was given Dr. William F. Rienhoff, Jr., of Johns Hopkins University, Baltimore. Doctors O. P. Kimball of Cleveland, Ohio, E. P. and D. R. McCullagh, Cleveland, Clinic Foundation, Cleveland, Ohio, and Robert P. Ball of the University of Louisville, received honorable mention.

* * *

Dr. J. R. Chappell, Box 1370, Orlando, as chairman of the Golfers' Committee, would like to get in touch with all doctors who desire to play at the Annual Meeting in May at Orlando. It is planned to play on Tuesday and award prizes at the banquet that evening.

ARCHIE McCALLISTER

Dr. Archie McCallister, as evidenced by the following personal history, was a very active, useful man during the forty-one strenuous years of his life.

His cruel assassination January 4th, right in the doorway of the Tarpon Springs Municipal Hospital, to whose service he was deeply devoted, was a sad blow to the profession and deeply affected his entire community.

He was born at Ben Haden, Wakulla County, Florida, July 9th, 1889. He was graduated in medicine from Emory University, Atlanta, Georgia, in June, 1916, and started to practice in Montana. In 1917, Dr. McCallister enlisted in the Medical Corps of the United States Army and was sent overseas where he served in the front line hospitals in France during the World War, after which he was sent by the Red Cross to Montenegro and later to Russia to combat a severe epidemic of typhus fever.

Dr. McCallister returned to the United States in 1920 when he married Miss Nina Rhodes of Tallahassee, Florida, and did work for the government in Minnesota and Texas. In 1925, he resigned and moved to Tarpon Springs where he practiced until his death. He was a major in the Medical Reserve Corps, examiner for the U. S. Aviation Bureau, director in the First National Bank of Commerce, member of the Rotary Club, and D. A. V., 32nd degree Mason and Shriner.

Besides his widow, he leaves two sons, Archie, Jr., age 8, and Louis Roy, age 5.

Doctors who are interested in meetings of medical fraternities or alumni of medical schools at the Fifty-Eighth Annual Convention in Orlando next May are requested to communicate with Dr. G. H. Edwards, chairman of the general committee, who will arrange for suitable times and places for such meetings. Dr. Edwards' address is care Orlando Clinic, Orlando.

FOR SALE—A complete X-ray outfit for radiography and superficial therapy. Priced very low. Address A. S. Munson, M.D., 110 South Boulevard, DeLand, Fla.

THE WOMAN'S AUXILIARY PAGE

WOMAN'S AUXILIARY
TO THE
FLORIDA MEDICAL ASSOCIATION, INC.

State Editor
MRS. EDWARD JELKS,
2244 St. Johns Avenue
Jacksonville

OFFICERS

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MRS. J. M. IRWIN, Historian	St. Augustine
MRS. J. E. TAYLOR, Secy.-Treas.	DeLand

Do any of the Auxiliary members, in Florida, ever read the Woman's Auxiliary Page in the Bulletin of the A. M. A.? Mrs. Walter Jackson Freeman's letter, in the December issue, is delightfully written and full of interesting information concerning the work of many State Auxiliaries.

Mrs. Freeman tells us that she has received detailed reports of the Annual Meetings of the Virginia and Kentucky Auxiliaries. Of these reports she has the following to say: "Kentucky history begins in the medical profession, for not Daniel Boone but a Virginia physician, Dr. Thomas Walker, was the first white man to penetrate the Cumberland Gap in 1750 and again in 1758. The State Historian's report is of thrilling interest, and already 11 of the 22 County Auxiliaries are busily collecting historical data, and some 200 medical biographies are in hand. Kentucky is also staging a feature, to me unique—a contest for County Auxiliaries, the winners to be determined by the number of credits obtained for; paid-up memberships, completion of approved study courses on the national Study Envelopes and on medical legislation, contributions to the Jane Todd Crawford memorial, Hygeia subscriptions, medical biographies, Auxiliary scrap books, items for the State Medical Journal, etc. . . . Other important Kentucky activities include . . . the continuation of their work under the State Health Department, the study of medical legislation, and the weekly 10-minute radio talks (Louisville WLAP, Thursdays, 10:50 a. m.) by members of the Jefferson County Medical Society, introduced by Auxiliary members, who also choose the subjects and make all the arrange-

ments. The Auxiliary keeps these addresses (thirty-three to date) on file for use in all kinds of meetings. At the Virginia meeting, special stress was laid on strengthening the developing County Auxiliary organization, and on cooperation with the State Health Department and with the Committee on Public Relations of the State Medical Society. . . . The Richmond Auxiliary assisted the Academy of Medicine in preparing a float portraying the yellow fever investigations of Dr. Walter Reed, which won first prize in the parade of Adventures Day. Plans for next year's convention include two days of meetings, the second to be devoted to round table discussions." Do the above reports fill you with enthusiasm for our meeting in May in Orlando? Are you eager for our Florida Auxiliary to be doing similar splendid work in this wonderful State of ours?

* * *

BROWARD COUNTY

A letter from Mrs. Leigh F. Robinson, our State Program Chairman, informs us that she expects to send out this month to the County Auxiliaries, Study Health Programs. She also states that the Broward County Auxiliary sponsored the sale of Christmas seals in that county this year.

* * *

VOLUSIA COUNTY

This Auxiliary entertained the Volusia County Medical Society with a card party on December 3, at the home of Dr. and Mrs. R. L. Miller, Daytona Beach. It was a delightful party, with about thirty-five people present. First prizes were won by Dr. and Mrs. Joseph Taylor, of DeLand, second by Mrs. J. P. Esch, Daytona Beach and Dr. Robt. McCord, of Atlanta, Ga. The cut prize was won by Dr. C. C. Bohannon, Daytona Beach.

The Volusia County Auxiliary held a regular meeting on December 11, in DeLand, with dinner at the Lexington Hotel and a radio concert and social hour afterward.

On January 13, the next regular meeting was held in New Smyrna. With the approval of the Medical Society, permission was granted Mrs. Wells, at this meeting, to present to the Volusia County Federation of Women's Clubs, the idea of the establishment of a county health Unit. Mrs.

Wells informs us that the Federation approved. An interesting feature of this meeting was a talk by Mrs. L. W. Glatzau, a former member of this Auxiliary, who has just returned from Vienna, where her husband has been taking a post-graduate course. Mrs. Glatzau told of her stay there and particularly of the A. M. A. Auxiliary in Vienna.

* * *

DUVAL COUNTY

The Duval County Auxiliary held its first meeting of the year on the evening of January 6, at the home of its new president, Mrs. W. W. Kirk. There were two speakers present, Mrs. Willis Ball, of Jacksonville (who told of the need of educating this community concerning social hygiene) and Mr. Sherwood Smith, Executive Secretary of the Florida Public Health Association. Mr. Smith gave a talk on the prevention and cure of tuberculosis in the state, and made a plea for Hope Haven, our home for tubercular children.

At the close of these talks, the Auxiliary voted to contribute a definite sum to aid Mrs. Ball in bringing Dr. Valeria Parker to the city for a series of lectures on social hygiene, and also voted to contribute \$25.00 to the capital fund of Hope Haven.

It was decided (at the suggestion of Mrs. H. H. Harris, Chairman of Hygeia) that the Duval County Auxiliary give three subscriptions to Hygeia, one for the Y. W. C. A., one for the Woman's Club and one for the Public Library.

Mrs. Driskell, president-elect of the State Auxiliary, gave an excellent report of the meeting of the Woman's Auxiliary to the Southern Medical Association which was held in Louisville in November. She announced that she was proud of the fact that the two members present from Florida were from the Duval County Auxiliary.

At the close of the business meeting, tea and sandwiches were served by the social committee. Mrs. S. A. Norris, chairman. It was announced that the next meeting would be held the first Thursday in March, in the home of Mrs. Horace Drew.

* * *

The Ladies' Auxiliary of the Pinellas County Medical Society met in St. Petersburg, Friday evening, October 17th, at 8 p. m., which was the regular meeting date of the Pinellas County Medical Society.

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COUNTY SOCIETY	SECRETARY	MEETINGS				Dues Paid.
		Date	Time	Place	Luncheon?	
Alachua	J. E. Maines, Jr., M.D., Gainesville.	2nd Tuesday	12:00 Noon	White House	Yes.	
Bay	Don S. Fraser, M.D., Panama City.					
Brevard	I. K. Hicks, M.D., Melbourne.	3rd Tuesday		Varies		
Broward	Anna Darrow, M.D., Ft. Lauderdale.	2nd Tuesday	8:00 P.M.	Chamber of Com- merce	No.	
Columbia.....	T. H. Bates, M.D., Lake City.	1st Monday.	7:30 P.M.	Blanche Hotel		
Dade	Jos. S. Stewart, Jr., M.D., Miami.	1st Friday	8:30 P.M.	Club Room, Huntington Bldg.	Occasionally.	
DeSoto-Hardee- Highlands ...	H. V. Weems, M.D., Sebring.		8:00 P.M.	Varies	Yes.	
Duval	Kenneth A. Morris, M.D., Jacksonville.	1st Tuesday	8:15 P.M.	Chamber of Com- merce Building	No.	
Escambia	J. M. Hoffman, M.D., Pensacola.	1st Tuesday	8:00 P.M.	Board of Health Building	No.	
Hamilton	J. R. Bruce, M.D., Jasper.					
Hillsboro	J. T. Cowart, M.D., Tampa.	1st and 3rd Tues- days	8:00 P.M.	Tampa Municipal Hospital	No.	
Jackson	C. H. Harrison, M.D., Cottondale.	2nd Tuesday	3:00 P.M.	Marianna	No.	
Lake	W. L. Ashton, M.D., Umatilla.	1st Thursday	12:30 P.M.	Eustis	Yes	
Lee	H. Quillian Jones, M.D., Ft. Myers.	3rd Friday	7:30 P.M.	Lee Memorial Hospital	No.	
Leon-Gadsden- Liberty- Wakulla- Jefferson	O. G. Kendrick, M.D., Tallahassee.	Quarterly	3:00 P.M.	Varies	Yes.	
Madison	Geo. O. Davis, M.D., Madison.					
Manatee	A. Q. English, M.D., Manatee.	1st and 3rd Tues. Oct. to May; 2nd Tues. May to Oct.	7:00 P.M.	Dixie Grande Hotel	Yes.	
Marion	Thos. H. Wallis, M.D., Ocala.	3rd Thursday	12:30 P.M.	Marion Hotel	Yes.	
Monroe	W. R. Warren, M.D., Key West.	1st Sunday	9:00 P.M.	Varies	Yes.	
Orange	J. R. Chappell, M.D., Orlando.	3rd Wednesday	8:30 P.M.	Varies	No.	
Palm Beach ...	R. G. Lewis, M.D., W. Palm Beach.	2nd Monday	8:00 P.M.	Court House	Yes.	
Pasco- Hernando- Citrus.....	Geo. R. Creekmore, M. D., Brooksville.	2nd Thursday	7:00 P.M.	Varies	Yes.	
Pinellas	O. O. Feaster, M.D., St. Petersburg.	Every other Friday	8:00 P.M.	500 Power & Light Bldg.	No.	
Polk	Herman Watson, M.D., Lakeland.	2nd Wednesday in Feb., Apr., June, Aug., Oct., Dec.	1:00 P.M.	Lakeland	Yes.	
Putnam	E. W. Warren, M.D., Palatka.	2nd Thursday	7:00 P.M.	James Hotel, Palatka	Yes.	
St. Johns	A. C. Walkup, M.D., St. Augustine.	3rd Tuesday	8:30 P.M.	Varies	Yes.	
St. Lucie-Okeecho- bee-Indian River-Martin ..	C. L. Davis, M.D., Okeechobee.	3rd Thursday	8:00 P.M.	Varies	Yes.	
Sarasota	F. C. Metzger, M.D., Sarasota.	2nd Tuesday	8:30 P.M.	Varies	Occasionally.	
Seminole	J. T. Denton, M.D., Sanford.	2nd Friday	8:00 P.M.	City Hospital		
Sumter	W. E. Mitchell, M.D., Coleman.	2nd Tuesday		Varies	No.	
Suwannee	W. C. White, M.D., Live Oak.					
Taylor	R. J. Greene, M.D., Perry.	Last Thursday	12:15 P.M.	Eldorado Cafe	Yes.	
Volusia	J. Ralston Wells, M.D., Daytona Beach.	2nd Tuesday	7:30 P.M.	Varies	Yes.	
Walton- Okaloosa	A. G. Williams, M.D., Lakewood.	3rd Thursday	8:00 P.M.	Varies	Occasionally.	
Washington- Holmes	H. A. McClure, M.D., Chipley.					

NOTE—Secretaries: Please submit information to complete the above schedule.

TUBERCULOSIS ABSTRACTS

A REVIEW FOR PHYSICIANS

ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

WHAT role does calcium play in the healing of tuberculous lesions? Does the deposit of calcium hasten the reparative process or does it but replace destroyed tissue? No other mineral element has been so thoroughly investigated in tuberculosis research as calcium. Attempts to influence the course of tuberculosis by the therapeutic use of calcium have repeatedly failed. But more recent knowledge about nutrition and heliotherapy has revived interest in the subject. Calcium metabolism is undoubtedly influenced by vitamins and by certain rays of the solar spectrum. A general review of the calcium question should be helpful in evaluating the claims and theories of recent writers. The following notes are derived from the November, 1930, American Review of Tuberculosis in an abstract of a paper by R. Monceaux in the Revue Belge de la Tuberculose.

CALCIUM EXCHANGE IN PULMONARY TUBERCULOSIS

Boyer, in 1869, declared that the lung undergoes a decalcification in phthisis, but it is chiefly to Ferrier that latterly accepted theories are to be credited. Ferrier's experiments were crude and his evidence was not convincing, but he added other arguments that had to do with the relation between dental caries and bony demineralization, the calcium reserve, and other suggestive observations. Most French authors contend that decalcification begins in the early stages of tuberculosis and disappears in advanced cases. This they determined simply by estimating the amount of calcium excreted in the urine. Robin gives the normal urine calcium as 0.281 gms. per day.

COMMENT ON DECALCIFICATION THEORY

To consider only the degree of calcuria is very misleading for it may vary from 0.16 to 0.69 gms. on an identical regimen. In fact, most of the calcium is ordinarily excreted in the feces. The only really scientific method of estimation is to determine the calcium balance or relation between total intake and output. This has been done in tuberculous patients, at rest and on a measured ration, and a negative balance was found in certain patients in whom active disease caused wasting. In these cases, a dose of 2 gms. calcium oxide per day was necessary to compensate the

(Continued on page 392)

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loss. Except for these conditions, tuberculous persons behaved about normally and consumed daily about 1.5 gms. calcium oxide. Hence, it was concluded that decalcification is not a specific characteristic of tuberculosis but is associated only with denutrition. One investigator even found positive balances in a number of tuberculous persons.

Ferrier declared that dental decalcification went hand in hand with body decalcification. Others have been unable to confirm this, and Villemin pointed out that in rachitic children dental lesions were rare.

Barkus was unable to determine any loss or any increase of calcium as cure occurred and in guinea-pig experimental tuberculosis could not demonstrate any diminution of calcium. Others even found an increase in animal necropsies, and some have shown that the calcium content of organs varies with the physiological state.

CALCIUM IN THE BLOOD

Recent studies have been made on the blood calcium. Tuberculosis *per se* causes no lowering of blood calcium. Hemoptoic patients with prolonged coagulation time showed slightly lower concentrations but the differences were slight. The normal variations are from 9.22 mgm. per 100 cc. serum to 10.78 mgm. From 120 to 130 mgm. per litre were found even in cavity and bronchopneumonic cases. The tuberculous blood is not impoverished in calcium. Moreover, variations, when they exist, are dependent on cachexia and alimentary insufficiency.

RECALCIFICATION

In spite of these objections, the dogma has been reiterated that the great curative principle in tuberculosis is recalcification. This is carried out (1) by administering calcium phosphate and other salts and (2) by instituting a diet regimen. The only demonstrable advantage of calcium medication is that it may act favorably on the stomach, which often in the tuberculous shows hyperchlorhydria. Calcium lactate given by mouth does not increase the blood calcium, nor will a calcium-rich dietary increase tissue calcium. In fact, in the tuberculous, calcium chloride or lactate may even increase calcium loss, especially the chloride. The glycerophosphates and carbonates are not assimilated at all and even increase calcium loss. Phosphorus and calcium have a certain optimum relation, realized in the tuberculous when there is a slight excess of calcium. If this is exceeded,

(Continued on page 396)

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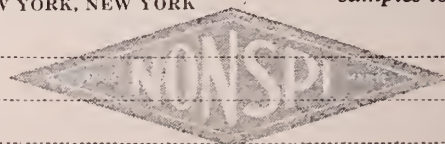
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there is a tendency to the formation of insoluble calcium phosphate, which is eliminated by the intestine—therapeutic decalcification. Calcium therapy might be useful when there is insufficient alimentary calcium, as in Germany during the War, but metabolic disorders cannot be combated; that is, the organism cannot be made to fix calcium. Superfluous quantities are rapidly precipitated in the tissues for the blood is normally physiologically saturated.

FIXATION OF CALCIUM

It was believed that the addition of adrenalin would solve the problem, and two workers diminished calcuria under this regimen. However, these results have been questioned and it has been shown that there is always a corresponding intestinal debit. Solar ray, ultra-violet radiation, and vitamin A have been used but without effect. In rickets, only the ultra-violet rays and cod liver oil containing vitamin A protected animals, but this condition differs essentially from tuberculosis.

CALCIFICATION OF TUBERCLES

Calcium deposits in tubercles have been accepted as obvious proof that calcium plays a defensive role by walling off bacilli. However, calcium salts are only deposited in necrotic tissue. Calcium does not precede nor favor cicatrization of lesions and probably does not even arrest the progress of lesions. It is much more probable that calcification follows rather than effects a cure. In bovine tuberculosis, large quantities of calcium are deposited in and about progressive lesions. Also, bony tissue offers no special resistance to tuberculous infection.

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Calcium salts do not inhibit the development of the tubercle bacillus; on the contrary, they often favor growth on culture media. Neither has any favorable effect been noted in tuberculous animals.

CONCLUSIONS

If there is no decalcification, still the tuberculous need a little more lime than normal persons to maintain a favorable balance. Calcium may stimulate phagocytosis and certain other favorable reactions. However, intensive calcium therapy, on the basis of the foregoing work, must be rejected as useless. Nature furnishes abundant calcium, especially in water, milk, eggs, and legumes. The best alimentary medium is milk, of which 0.5

(Continued on page 398)

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litre per day, with leguminous purees or eggs, suffices. Articles which tend to precipitate calcium in the form of oxalates—rhubarb, sorrel, cocoa, endive—should be avoided. If in the presence of food rich in calcium it is not assimilated, the organism is at fault physiologically. This is often the case in tuberculosis, especially when oxidation is impaired, with a resultant tendency to humoral acidity. In such cases, phosphoric acid may be given, which indirectly favors retention of calcium. The bi-phosphates and lactophosphates can also be used.

BASIC FEEDING IN TUBERCULOSIS

Mayer and Kugelman, in a preliminary report on "Basic (Vitamin) Feeding in Tuberculosis," *Journal of the American Medical Association*, December 14, 1929, attempt to evaluate the special dietary regimen for tuberculous patients advocated by Sauerbruch and Gerson. They declare that dogmatic statements are not yet warranted but admit that the favorable results observed in about one-third of the patients studied may perhaps be attributed to the effect of the dietary.

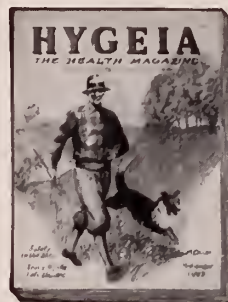
The authors maintain that the special dietary is an alkali-forming one and not acid-forming as the Germans contend. Experimental studies on the effect of acid and base-forming dietaries in rats show that animals on the base-forming dietary thrive to a maximum degree, grew rapidly, and were more active than those on the acid-forming diet. Similar studies on patients showed that the acid-base equilibrium shifted toward the basic side on base-forming diet. They believed that the inorganic constituents and the vitamins are the favorable factors and that the vitamins are the more important. The absorption and utilization of minerals depend on the vitamins present in the alimentary tract.

(This review secured by the Florida Public Health Association from the National Tuberculosis Association).

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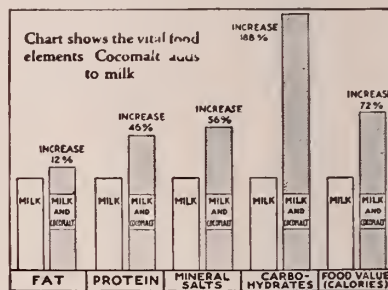
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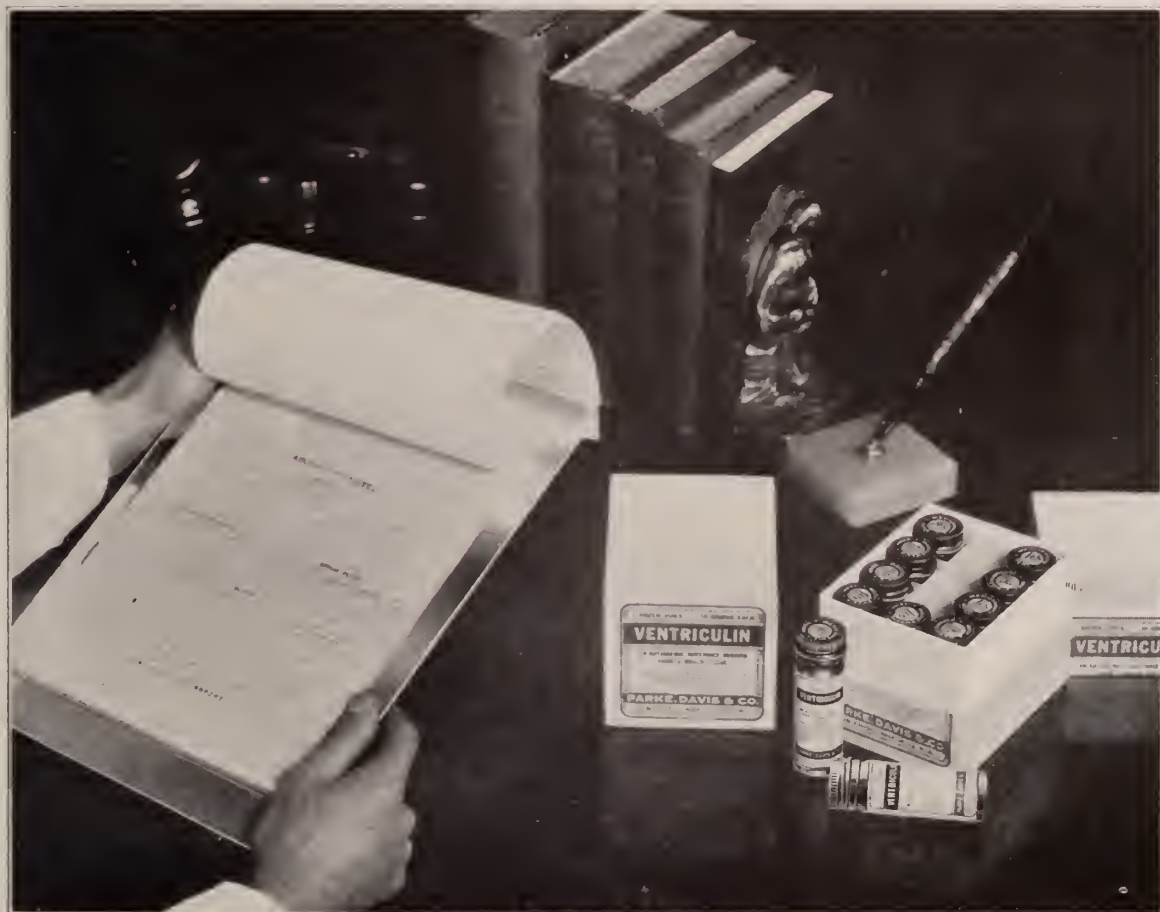
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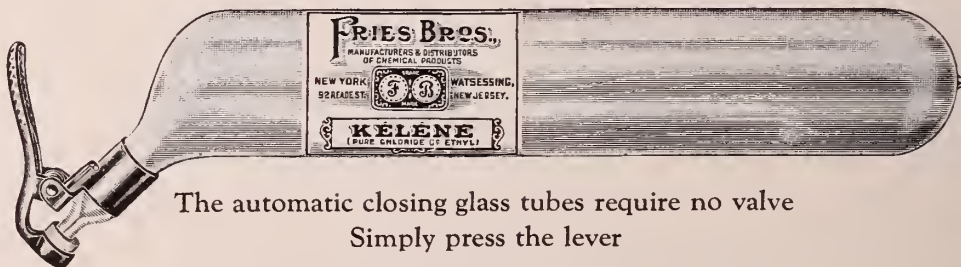
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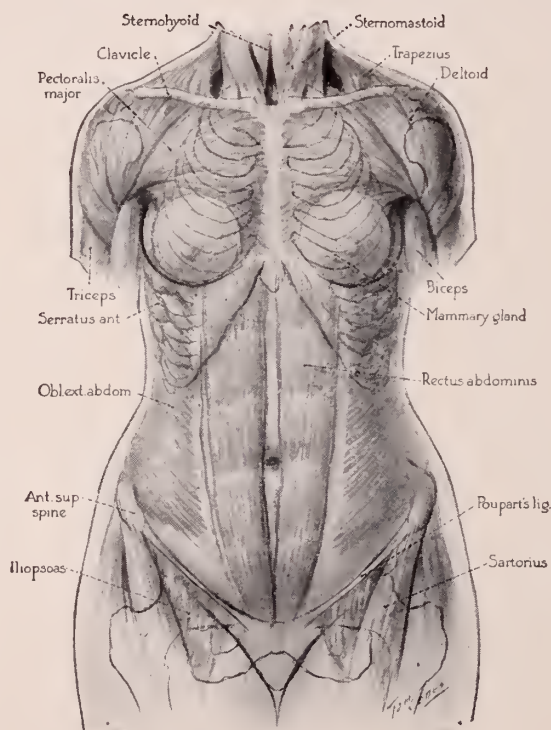
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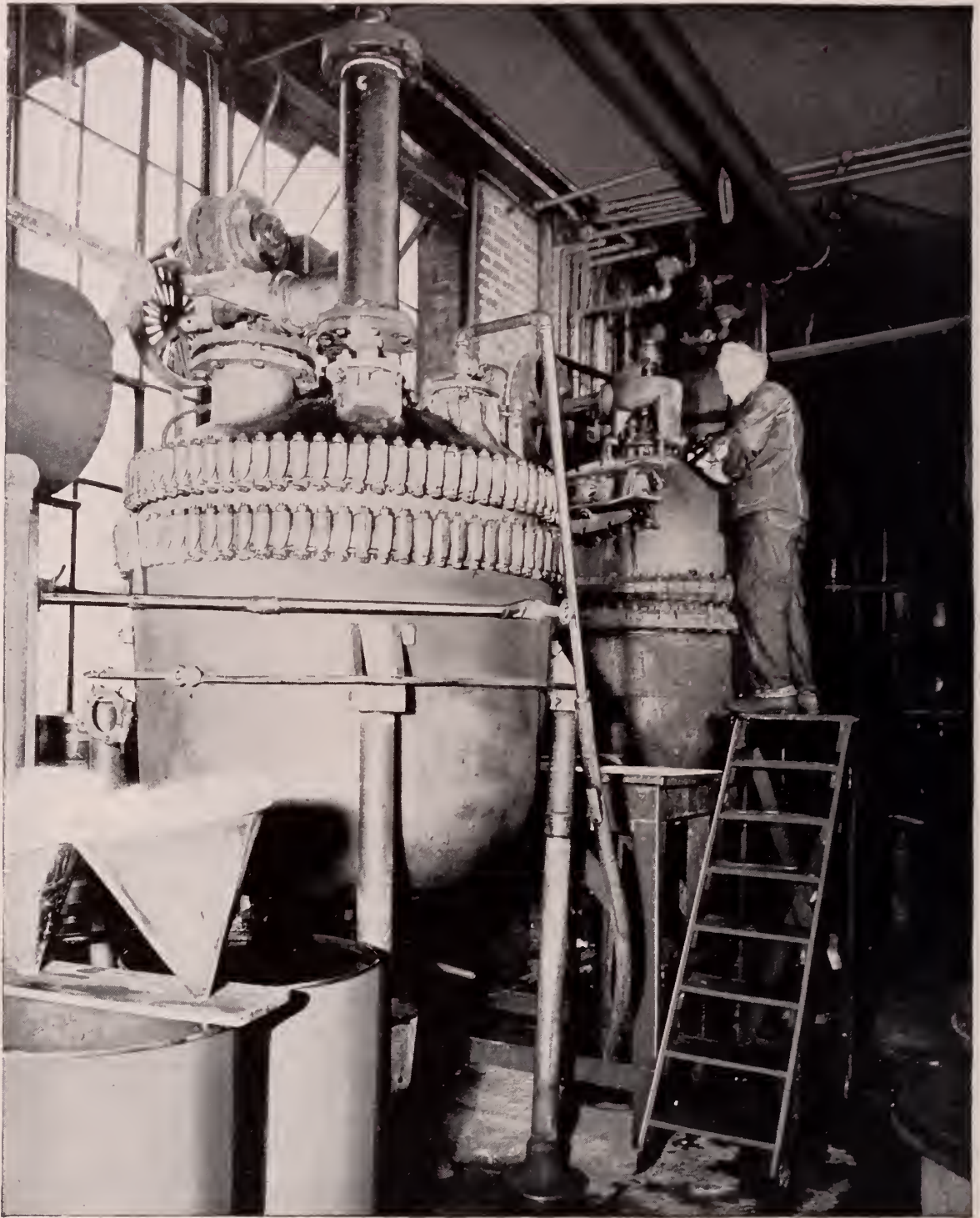
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THE JOURNAL OF THE FLORIDA MEDICAL ASSOCIATION

PUBLISHED MONTHLY

Volume XVII

Jacksonville, Florida, March, 1931

Number 9



Fig. 1. Case I. W. B.—Roentgenogram of Collapse of Left Lung showing Trachea, Mediastinum and Heart displaced toward involved side. Left interspaces narrowed.

MASSIVE COLLAPSE OF THE LUNG

W. M. SHAW, M.D.,

Jacksonville.

Massive collapse of the lung was first described by W. Pasteur in 1890, at which time he reported 34 cases. Subsequently, he made use of the condition as a subject for his Bradshaw lecture in 1908. He further discussed it in an article which was published in 1914. The condition has been defined as a reaction of an obstructive nature in which the affected part of the lung becomes airless. It is characterized by a displacement of the mediastinal contents to the involved side, decreased radiability of the affected lung tissue, a

high diaphragm, a flattened chest on the affected side, increased pulse and respiratory rate, cyanosis, and an abrupt onset within 48 hours after an operation or injury.

Since the introduction of the subject by Pasteur, several scientific articles by physicians of prominence have appeared in the literature. Those deserving special mention were written by Bradford, Scott, and Sante, all of whom leaned to the neurogenic origin as the causative factor. Lately, however, the obstructive theory, which was first pointed out by Elliot and Dingley and later by Chevalier Jackson and Walter L. Lee, has been receiving the greater support. While sex and age

are said to play no part in the etiology, there is much evidence to indicate a seasonal variation in the disease, the first three months in the year being credited with the largest number of cases. The condition seems to have a predilection to develop after operations upon and injuries to the abdominal organs. The type of operation itself has no bearing, and neither has the anesthetic. The right lung is by far the one most often involved. It is of interest to note that in a series of 2,346 operations performed at the Peter Bent Brigham Hospital of Boston on patients with intracranial neoplasms no case of massive collapse of the lung has been noted.

Drs. Cornelius G. Dyke and M. C. Sosman of Boston state: "The fact that the right lung and especially the right lower lobe are so much more frequently affected than the left, forces us to dismiss the theory of a predisposed pulmonary nervous mechanism as of primary importance. We believe that collapse of the lung is primarily due to obstruction of a bronchus or several bronchi by tenacious mucus and not by a mucus plug." There are several things that favor a development of the condition; namely, 1st, a limited excursion of the diaphragm and thorax and the position of the patient during or following the operation, both of which prevent proper aeration of the lungs; 2nd, a diminished cough reflex favoring stagnation and drainage into the dependent lung. If the patient occupies the supine position, the right lung will be the one affected in at least four out of five cases because of the anatomical structure of its primary bronchus. As soon as obstruction does occur, the air in that part of the lung which is supplied by the obstructed bronchus, is absorbed into the pulmonary circulation. This absorption of the gases encourages a negative pressure which makes condition fertile for a secretion from the cells lining the bronchioles and aids the fluids in permeating the capillary walls and filling the aveolar cells. This will explain the heavy congested lungs and hydropic aveolar cells sometimes found at autopsy.

Massive collapse most frequently occurs within 48 hours after operation; however, it has been known to develop as late as six days afterward. There is either an abrupt onset or one of more gradual development dependent on whether the obstruction occurs in a large bronchus or one of its branches. A moderate elevation of temperature, an increased pulse and respiratory rate, a patient without any complaint of pain but insistent upon lying on one particular side and suffer-

ing from a breathing that is labored, hasty and jerky; the alae nasi dilating with each inspiration; more or less cyanosis and an absence of a cough, should lead one to suspect a collapse. Later, cough and expectoration are usually indicative of resolution.

In the severe cases, these patients have the appearance of being very ill. When one or more lobes are involved, there is not only a definite decrease in the expansion of the involved side but a compensatory increase on the normal side. The apex beat is displaced toward the affected side. Palpation further confirms a decrease of the expansion of the affected side, as well as the displacement of the maximum cardiac impulse. The percussion note will be either dull or flat over the involved part of the lung. Auscultation confirms the malposition of the heart, and in obstruction



Fig. 2. Case 1. W. B.—Autopsy specimen showing left lung collapsed and dense. Right lung emphysematous.

yields suppressed or diminished breath sounds, and either a decrease in the intensity or an absence of the whispered or spoken voice, while in consolidation there is a tubular breathing and increased whispered and spoken voice sounds. Rales are numerous and vary from fine crepitant to harsh piping rales. The physical signs change as soon as the obstruction has been relieved and then you will hear rales of all types.

The roentgenographic appearance of the chest in these cases is not only striking but most characteristic. (Fig. 1.) One entire side of the thorax will show a dense, homogenous consolidation of the lung. There will be decided narrowing of the chest wall on the affected side with a decrease in the intercostal spaces; the trachea, heart, and other mediastinal shadows are definitely misplaced toward the involved side. The uninvolved side shows a compensatory emphysema. X-ray films of the chest are indispensable in the diagnosis of minor degrees of atelectasis. The most probable

confusion arises in a differentiation of this condition from broncho-pneumonia; however, a lack of displacement of the mediastinal contents in pneumonia should rectify the diagnosis. Dr. Sante of St. Louis with the aid of the fluoroscope has been able to demonstrate an immediate reinflation of the collapsed lung while the patient was

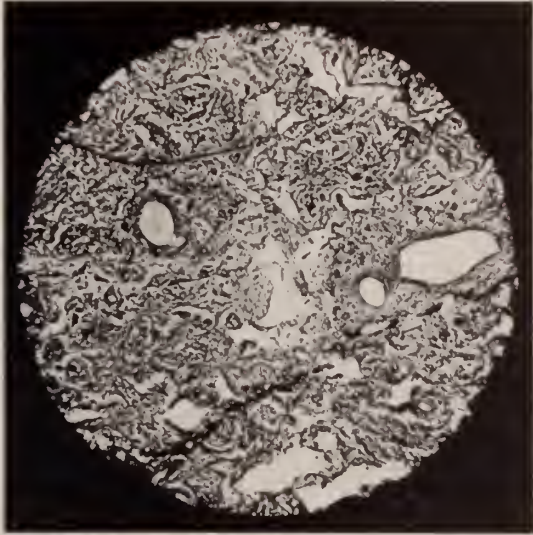


Fig. 3. Case I. W. B.—Photomicrograph of collapsed left lung tissue showing replacement by fibrous tissue.

rolled back and forth on the uninvolved side and encouraged to cough. Dr. Jackson of Philadelphia has also demonstrated, by means of the fluoroscope, a prompt recovery after the bronchoscopic removal of the mucus.

Several procedures, practised as a means of prophylaxis against the development of massive collapse of the lung, seem to be worthy of routine use: (1) hyperventilation of the lungs during and after operation with carbon dioxide and oxygen as advocated by Scott and Cutler who claim that its use has diminished the incidence of massive collapse seventy-five per cent; (2) changing the position of the patient every 6 hours after the operation to prevent the accumulation of secretions in the dependent portions of the lungs; (3) curtailment of post-operative sedatives, especially those which depress the cough reflex and thereby favor the stagnation of secretions.

Having presented this brief resume of so-called idiopathic massive collapse of the lung, I now invite your attention to a massive collapse of the lung which is due to extrinsic pressure on a main bronchus, especially when caused by an aneurysm of the thoracic aorta. If there is a pressure on a main bronchus or any of its subdivisions sufficient to occlude the passage of air through it there will

soon follow an absorption of such air as is left in the segment of lung supplied by the obstructed bronchus or its branches. In these cases the resulting collapse develops, as a rule, by a gradual process. If the pressure fails to entirely obstruct but only impairs the flow of air, then emphysema and not atelectasis will develop in the involved segment of lung. This phenomenon is of special importance in the roentgen location of foreign bodies in the air passages. Complete obstruction will lead to a prompt absorption of the retained air and a rise in the negative pressure until the affected lung hugs the lateral or posterior chest wall. The heart, trachea, and other mediastinal structures will follow it over; the diaphragm is pulled upward, and the normal lung often becomes so distended with a compensatory emphysema as to cause it to extend across the midline.

CASE REPORTS

Case I. W. B., a colored male, 54 years of age, and decidedly wasted, was first seen in the O. P. Department of the Duval County Hospital July 17, 1929. At that time his chief complaint was soreness in his chest and a cough with hemoptysis. The physical examination of the chest showed a lagging of the chest wall, dullness to flatness, absent fremitus and absent breath sounds over the entire left thorax. The apex beat was displaced to the left, as also was the trachea. A bronchoscopic examination disclosed an occlusion of the left main bronchus just below the bifurcation of the trachea. The roentgen examination resulted in a diagnosis of collapse of the left lung and enlargement of the heart. (Fig. 1.) He was



Fig. 4. Case II. C. S.—Photomicrograph of collapsed left lung tissue showing replacement by fibrous tissue.

admitted to the Hospital February 10, 1930, suffering from air hunger and an absence of the breath sounds over the left thorax. He died on the fourth day after gradually growing weaker.

The postmortem examination revealed the right lung markedly hypertrophied reaching up into the left side. Looking anterior into the pleural cavity, the left lung could not be seen. The left lung was collapsed and adhered posteriorly and laterally to the ribs. (Fig. 2.) It was removed with difficulty. At the posterior border of the arch of the aorta a small aneurysm about the size of a lemon was found pressing on the left bronchus near the bifurcation of the trachea. The



Fig. 5. Case II. C. S.—Autopsy specimen showing blood clot "in situ" obstructing left main bronchus.

left bronchus was completely occluded. The heart was enlarged. (Fig. 3.)

Case II. C. S., a white male, 48 years of age, was admitted to the Duval County Hospital July 14, 1929. The chief complaint was a stabbing pain in the left chest. He dated the beginning of his present trouble to a sharp pain which he had suffered in his lower right chest about two months previously and which later, he said, had moved to his left arm and had remained there. He gradually developed a cough and expectorated large amounts of a yellowish, fetid sputum, without any trace of blood. He claims he had lost 30 pounds in weight during the past three months. At the time of the examination, the patient was poorly nourished, presented normal physical signs over the right lung, but the left showed a decreased expansion, an absence of vocal fremitus, percussive dullness, and diminished breath sounds over the upper lobe and absence of them entirely over the lower lobe. The blood pressure was 130/80. The laboratory reported a secondary anemia and

a negative Wassermann. He died suddenly the 11th day, sitting up in bed, after coughing.

The postmortem revealed about 200 c.c. of sero-sanguinous fluid in the right chest and a congested right lung with extensive adhesions to the inside of the chest wall. Right lung weighed 720 grams. The left lung weighed 1200 grams. (Fig. 4.) It was firm and sunk in water, its surface was tarry black and the lung on section disclosed pus in the bronchi and bronchioles. The diagnosis was "Unresolved Pneumonia." However, (Fig. 5) in the descending portion of the aorta, at the level of the bifurcation of the trachea, there was an aneurysmal opening about the size of a half dollar which had eroded into and destroyed the main left bronchus, leaving an organized clot in situ.

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SPINAL ANESTHESIA AS AN IDEAL.*

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Spinal anesthesia has been at various times termed the "ideal anesthesia." Although it probably approaches the ideal in many instances, the true ideal will never be reached, because no two humans react alike to the same stimulus, no two are identical in health or disease. Bread for one, is poison for another. Spinal anesthesia gives us one more avenue by which we can safeguard our patient, one more opportunity to fit the method to the patient, rather than fit the patient to the method.

The literature at the time of my first writing on this subject,¹ 1920, was not as voluminous as it is now. At that time, I wrote, "Is it (spinal) a sky rocket bursting brilliant, then falling—or is it reaching its logical, useful level among our anesthetics?" Time has answered the question. On through, until 1927, when I reported five hundred and fifty cases,² I have watched the growth

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of this form of anesthesia, have added my bit, and have read with interest the numerous articles that are now appearing broadcast in almost every medical journal. A few are adding facts and knowledge to our existing store, many are praising, a few are criticising, and the majority are making constructive conclusions. Many varied statements appear. We read one author as saying that spinal anesthesia is the ideal, because its instrument requirements are simple; one man alone can anesthetize and operate, and the technique does not need expert knowledge. Another will say that experience is essential and no one but a man trained by the side of a master should attempt this delicate procedure. Some enlarge upon text book anatomy and standard technique. It is very pleasant reading to find articles so well written, modest, clear, and conclusive, as the ones by J. J. McMullins,³ D. H. Bessesen,⁴ Charles Donald,⁵ and Wayne W. Babcock⁶.

From the time of Corning in 1885, and Bier in 1898, the spinal route of analgesia has made relatively steady progress, with several years of adversity now and again, until at present, we approach the method with a considerable amount of confidence. To say that we have a "controlled spinal anesthesia" today I think is erroneous. We have controlled several minor points, but the major point, the fall in blood pressure, is still *to be* controlled. Spinal anesthesia has entered the field as a recognized procedure. I remember clearly some years ago, when I had to request, almost beg for, the opportunity to use the method, and was granted the opportunity on cases that were *unsafe for any other form of anesthesia*. Today that condition is entirely altered.

We know the method's contraindications which are few, and may be briefly enumerated. A hypotonic vascular system (below 100 mm. systolic whether from shock or disease*) cerebral tumors, cerebrospinal syphilis, and local infection at, or near, the spinal site of injection; about tabulate the group.

We know that a fall in blood pressure is to be expected, and we are not anxious about it, but take measures to combat it. We know that certain analgesic drugs will give certain definite results and those who have used the different ones, know their limitations. We know that certain drugs, used for spinal analgesia, affect both the motor and sensory spinal roots, and others affect only

the sensory (except in toxic doses), and we know their toxic limitations. In fact, we probably know as much about spinal anesthesia today, its toxic effects, and its limitations, as we do about ether or nitrous oxide, and thus, we approach the *ideal*, as expressed in terms of safety at least.

In broad terms, the aims of a surgical analgesia are: (1) to secure the operative site against conscious pain; (2) to secure complete relaxation of the parts operated through and upon; (3) to maintain body reactions and functions at a normal level throughout the operation; (4) to feel assured of a safe method of analgesia by not endangering normal or previously damaged vital structures, through the anesthetic agent; and (5) to know with *certainly* the length of time, and to what structures the pain sense will be abolished. Most all of us can think of other factors pertaining to an ideal analgesia, but I think that these mentioned include the main ones.

The drugs we have that have been found suitable for spinal analgesia are: cocaine, anhydrous cocaine (Abbott), stovaine, novocaine (procaine) (neocaine), and butyn. I have personally used them all to some extent, preferring the anhydrous cocaine for several reasons that I will enumerate.

C. P. cocaine as it appears on the market probably contains impurities that are more toxic than the active drug itself. A series of experiments performed in the University of Pennsylvania some years ago (1919-1920) under the guidance of Professor A. N. Richards, tended to point in that direction, although the series consisted of only several hundred animals, enough to be indicative, but not definitely conclusive. Stovaine I have used as prepared for Babcock by Morgan, its preparations being lighter or heavier than spinal fluid. The uncertainty as to time allowance, and the occasional long delay after operation in allowing the patient to assume a normal prone position with comfort and safety, and some post-operative headaches, are drawbacks. Novocaine (procaine) (neocaine) is a most satisfactory drug if used alone and not in combination. The objections are its uncertainty as to time allowance, the delay in obtaining analgesia, and the possibility of paralyzing the higher centers. The same dose may give analgesia of twenty minutes to two hours, or longer. Butyn (Abbott) has given good results the times I have used it, but its toxicity, the uncertainty as to time allowance, and the depression and the headaches that my pa-

*Using ephedrin judiciously as pre-operative treatment may, at times, alter this contraindication.

tients showed following its use, were reasons that I continue to use anhydrous cocaine. With this preparation of cocaine the ideals of a surgical analgesia are reached with the exception of the fall in blood pressure. This exception is common to all drugs, and all combinations of drugs, thus far recorded, that are introduced into the subarachnoid space. We have perfect analgesia which takes effect at once; with proper technique the height of analgesia from symphysis pubes to the head inclusive, can be accurately gauged to within two centimeters, and this level will not alter regardless of the alteration of the position of the patient; rarely do we find any change in heart or respiratory rate, and the time allowance as plotted previous to the operation can be gauged to within ten minutes. Post-operative headache is almost unknown.

From my own observations, I agree with Labat that combinations of drugs so far produced are not to be desired. On numerous occasions, I have attempted to combine with anhydrous cocaine drugs to overcome the fall in blood pressure, but have not been satisfied that the results were encouraging. One standard dose of any drug can not fit all patients, and a prepared combination *certainly* can not. As separate agents to support blood pressure to be used outside of the spinal canal, I have used various drugs and methods. Ergot and pituitrin are of little value; caffeine and strychnine have little action and are too slow; the digitalis series are slow and have no action that can be relied upon; adrenalin chloride and ephedrine are excellent each in its own sphere, provided the operator knows his case, its needs, and the time allowance before the danger mark is reached. If the case is of the adynamic type with a systolic pressure around 100 mm, or under, a course of ephedrine before operation will many times make of a doubtful risk a safe patient. Its action is slower and of a longer duration than adrenaline. On the other hand, during operation when the systolic pressure is falling rapidly and the diastolic following suit, we must use adrenaline, because this drug, intramuscularly, will give results in a minimum of twenty seconds. Then, too, its relatively fleeting action in this instance is to be desired. If its effects last only from twenty to thirty minutes, and the pressure is maintained after this time, we may be assured it is the result of the *patient's* vaso motor control, and so feel safe to leave the case after operation knowing the pressure *will be* maintained. If

ephedrine is used and the pressure is held by this drug an hour or so after the case is operated, a fall is apt not to be noticed in time, and disastrous or untoward results may be experienced. It is always a simple matter to repeat the dose of adrenaline if necessary. I have found that the 10 minims is a logical dose at one time. A smaller dose may not give desired results, and a larger one sometimes gives an uncomfortably high pressure. Again, I thoroughly agree with Labat, the Trendelenburg position should be used in every case of spinal analgesia, and I have come to rely on position first and drugs second in maintaining a safe level of blood pressure and normal functioning of the brain centers. I am aware of the arguments to the effect that in spinal analgesia drugs have no action on blood pressure and do not wish to enter this discussion at present, except to say that I have at times found adrenaline to be of undoubted value.

Technique. It is generally agreed that a blunt bevel spinal needle introduced in midline at right angles to the skin is the proper method. The old teaching to one side of the midline and pointing up, is erroneous. I do not think that there is any cause to endanger the cord by puncturing the canal at the level of the third or fourth (Quink's or Tuffier's point) lumbar foramen. I have never punctured for analgesia higher than the first lumbar foramen and have found no difference in the analgesia between the first to the fourth foramen. When a drug combination is used that depends upon gravity, or on its height of introduction, for its height of analgesia, we are taking from ourselves just so much of a safety factor. We all know that times arise, during an operation, when a quick change in a patient's position is almost essential to his, or to her, life. A poor cardiac risk may have to stay on a level, or even have the head and shoulders elevated. We may wish to have a Trendelenburg position for other than anemia of the brain, or a falling blood pressure.

"The simpler the procedure and the purer the drug, the better the method," is a good standard to follow. Anhydrous cocaine is toxic in toxic doses, and so is novocaine depending on how and where used in large doses. I have used novocaine for a para vertebral block numerous times, and I have experienced in two instances acute collapse, whether from the drug or not, I am unable to say. Both cases revived and recovered, but prompt action was necessary. Any drug to have usefulness,

generally has a safe and a toxic limit. These limits should be known and not feared. In anhydrous cocaine, I have never used over gm. .03 and rarely that. From animal experiments, gm. .05 is a maximum safe dose. A small dose gives the same quality of analgesia, but of a shorter duration. This is true to a certain extent with novacaine, but the time can not be relied upon. Like novacaine crystals, the anhydrous cocaine crystals are dissolved in the patient's spinal fluid. Gm. .01 will give from 15-25 minutes of analgesia; gm. .015, forty to fifty minutes; gm. .02, seventy to eighty minutes; gm. .025, one hour and forty to fifty minutes; and gm. .03, two hours and fifteen to thirty minutes. Analgesia is instantaneous.

The height to which the analgesia rises depends upon two factors; one the withdrawal of spinal fluid not to be returned, and second, the force with which the cocaine impregnated fluid is thrown into the spinal canal. I withdraw from ten to fifteen cc of spinal fluid, depending upon the weight of the patient. A given amount of crystals dissolved in a given amount of spinal fluid gives a known saturation. I use gm. .01 of crystals to each 1cc of spinal fluid. The dose is accurately gauged. The syringe containing this dosage is attached to the needle which has been left in situ and stiletted temporarily, stilette withdrawn and more spinal fluid withdrawn. A second quantity up to twenty cc is taken, depending upon the reaction during withdrawal. A dizziness, or a sharp pain in the occiput is a danger sign that must not be disregarded. When this point is reached, it is wise to stop and reinject, gently but immediately, two cc of the fluid. The entire amount is then injected, the force of the injection determining the height. This height does not alter, regardless of subsequent position of the patient. The force necessary for any required level is easily ascertained after a careful study of a dozen cases, or so, testing out each case for height and using this experience in the future cases; less force for lower, more force for higher.

To date, we may accurately say that spinal analgesia has been accorded a definite, safe and logical place in surgery; that it has passed the experimental stage and is now in the position of becoming more perfected; that various combinations of drugs and their menstums for spinal analgesia that sweep the country at intervals, because of the logical actions of each constituent appealing to a scientific mind, may be good; a

single drug however, with a known action, is more easily and surely controlled by both posture and simple definite drugs. The popularity and usefulness of this form of analgesia is growing rapidly, and as the surgeon finds the ease and safety of it, this method and block local will probably be used in the majority of major surgical cases of the future. The lay public will also have to be educated to achieve this ideal. I find that patients in certain parts of the country who "want to be put to sleep," do not doubt the ability of the surgeon to destroy pain, but dislike the idea of being awake during the operation. This is due in great measure to ourselves in not enlarging upon the benefits to the patient of not having to go through the forty-eight hours of nausea, vomiting, sweating, gas, pain, and the usual sequences of a general anesthetic. With the use of nembutal and spinal anesthesia, the idea of sleep will also be met, and still not use a general anesthetic agent.

Several basic facts and procedures, as stated in ², before referred to, are true today as they were when written and they need no repetition.

The giving of a spinal anesthetic is mechanically a simple procedure needing but anatomical knowledge and due care of anti and asepsis, *but* the administering of the state of analgesia in general should exact the utmost care and attention to detail of instructions of the more experienced, until such a time arrives when personal experience has been gained. Toxic drug limits and idiosyncrasies must be taken into account.

One of our great surgical teachers was once asked in my presence, "Why do you not administer your own spinal anesthetic?", and he replied, "Because I do not have my first hundred cases behind me." Caution at first and due care always, is sufficient for any surgeon in the use of spinal analgesia. In over six hundred personal cases with anhydrous cocaine of which the majority were B and C risks, we have had one death, and never have had a death that can be attributed to the method or drug. The one death occurred in a moribund case of a double amputation due to a diabetic gangrene of the feet, age 91 years. This death occurred about one hour after operation, having "gone bad" on the table, blood pressure normal, and death I feel sure was due to toxemia of the disease. We have had two cases of no analgesia. These were early in the series, and I believe due to faulty technique.

By the men using this method and drug, no

death has been reported to me to date. The drug I am using, anhydrous cocaine, is prepared for me by the Abbott Laboratories, using the original method of purification as laid down by Professor Jardin, University of Montpellier, France, without essential change.

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VON RECKLINGHAUSEN'S DISEASE Report of Case With Surgical Complications.

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Von Recklinghausen's disease with giant neurofibromata and surgical complications is sufficiently rare to warrant a report of the following case:

An Assyrian girl, store clerk, age 17 years, was admitted to St. Vincent's Hospital, Jacksonville, November 22, 1929, complaining of a swelling on her left arm. This growth had been present since childhood. It had gradually increased in size, more rapidly of late, and was very painful on pressure. Pain was experienced while working and whenever she would strike it against a hard object. There was a smaller swelling on her right forearm which had not caused any trouble. She was not aware of any other tumors. Her general health had always been good, and no other positive findings could be obtained from her past or present history. The family history revealed the fact that her father had had many dark brown patches of pigmentation and hundreds of small nodules scattered over his entire body.

The patient was fairly well developed and well nourished young girl, with muddy complexion and many large areas of brown pigmentation scattered over the entire surface of her body. Her mental capacity was below normal for a girl of seventeen years. Except for the brown patches, physical examination of the head, neck and chest showed nothing abnormal.

One spindle-shaped tumor was present on the outside of her left arm, about an inch above the elbow. It appeared to be just beneath the skin, freely movable, firm and quite tender to palpation. It was approximately 8 centimeters long and $4\frac{1}{2}$ centimeters wide. Another small disk-shaped tumor with a diameter of about $2\frac{1}{2}$ cen-



Fig. 1. Tumor of ulnar nerve of right forearm.

timeters was found beneath the skin on the anterior surface of her right forearm, about 2 inches above the wrist. (Fig. 1.) This tumor was also firm, freely movable and slightly tender to palpation, and it was situated directly in the course of the ulnar nerve. Pain on pressure was experienced in the hand along the distribution of this nerve. About 5 or 6 firm nodules about the size of peas were felt along the course of the ulnar nerve as high as the elbow.

A very large nodular mass, slightly movable and tender to pressure, was discovered upon palpating the abdomen. It occupied the right lumbar and right iliac regions and had a diameter of approximately 16 centimeters. Rectal examination showed that this mass had no connection with the



Fig. 2. Excised tumor of radial nerve (Length 6.25 centimeters; width 4.30 centimeters; thickness 3.75 centimeters).

uterus (which was normal in size), but another small, round, firm tumor, about the size of an egg, was felt in the posterior cul-de-sac. Four small, soft nodules, about the size of marbles, were discovered on further examination; one on the anterior surface of the right thigh; one just below Poupart's ligament on the left thigh; one on the anterior surface of the left forearm and one over the left scapular. Laboratory examinations, consisting of complete blood picture, Kahn reaction and examination of the stool and urine showed nothing abnormal. Roentgen-ray examination of the chest and abdomen showed nothing of importance except that both kidneys were normal in size and position and apparently had no connection with the large abdominal mass.

In the above physical findings, we have the three characteristic signs of Von Recklinghausen's disease or generalized neurofibromatosis:

(1) Soft, fibrous cutaneous nodules—neurofibroma of cutaneous nerves. Only four small nodules were present in this case, whereas innumerable such tumors are often scattered over the surface of the body.

(2) Tumors of peripheral nerves or plexiform neuromata on nerve trunks present on radial and ulnar nerves.

(3) Patches of brown pigmentation.

January 25, 1929, the tumor of the left arm was excised under local anesthesia. A longitudinal incision was made on the lateral surface of the arm, above the elbow, and a large, firm, white elliptical-shaped tumor was exposed. (Fig. 2.) It extended from the elbow about 8 centimeters up the arm between the brachialis anticus and the brachio-radialis muscles. The muscles covering the tumor were the thickness of a piece of paper, and this accounted for its superficial appearance. The radial nerve entering the upper pole seemed to be spread out through the tumor in every direction, and it could not be dissected free. The tumor was excised and the wound closed. Following the operation, the patient had a complete musculospiral paralysis or "wrist drop". Three days later, under general anesthesia, the wound was reopened and the ends of the radial nerve found at its upper and lower ends, about 10 centimeters apart. In order to bridge this gap, the upper end was dissected free for about 8 centimeters up the arm along the bone and the lower end was dissected free about 5 centimeters down the arm. About 7 centimeters in length was gained by acute flexion at the elbow, and the ends of the nerve were sutured under slight tension. Six silk sutures were used passing through the neurilemma only. The nerve was surrounded with muscle tissue; the wound closed; the forearm placed in acute flexion and the wrist held in a cocked-up position. In order to stretch the nerve without injuring it, the forearm was extended about one degree a day (after the method of Babcock) until it was completely extended. Six months after the operation, the action of the brachioradialis and extensor carpi radialis muscles returned. At the end of 7 months, the action of the extensor digitorum communis and extensor digiti quinti propius muscles returned and finally, at the end of 10 months, the action of the extensor muscles of the thumb was restored. The patient now has complete extension of wrist, fingers and

thumb with full use of her hand. (Fig. 3.) No signs of recurrence were present fourteen months after the operation.



Fig. 3. Showing voluntary extension of wrist, fingers and thumb 10 months following operation. Note patches of brown pigmentation on arm and chin.

The following pathological report by Dr. C. E. Royce was so descriptive of the excised tumor that I have quoted it practically verbatim:

Gross description—Length 2.5 inches. Width $1\frac{3}{4}$ inches. Thickness $1\frac{5}{8}$ inches. A definitely encapsulated mass or group of spherical and ovoid masses. The color is nearly white exterior and interior. The consistency is very elastic. The appearance of the cut surface is like that of a fibroma, bundles and whorls of fibres. The bulk of the tumor is in one egg-shaped mass, surrounded by smaller spherical or ovoid masses. A nerve trunk is seen at one pole of the tumor, projecting for $\frac{1}{2}$ inch. This nerve spreads out into the capsule, and is lost. It does not appear to pass through the capsule to the tumor, as the tumor mass may be shelled out with a perfectly smooth surface. In general, the substance is opaque, though a tendency to translucence is seen in the smaller nodules.

Microscopic-Hematoxylin and Eosin Stain. Loosely arranged cells, resembling smooth muscle or young connective tissue. The cells are arranged in groups which are turned this way and that, like iron fillings when influenced by magnetic force. In contrast to the elongated cells are others (possibly like cells in cross section), which present as circular dots. These are deeply stained by hematoxylin. * * *

REMARKS:

Reflexion after an operation that might easily have caused a permanent paralysis, strongly impresses one with the necessity of fully acquainting the patient with the possibility of such a result. The large abdominal tumor is being observed for any rapid increase in size, as this type frequently undergoes sarcomatous degeneration.^{2,3} Neither this tumor, nor those along the course of the ulnar nerve have produced any symptoms to date. To quote Osler: "The prognosis depends on the possibility of successful removal of such tumors as are causing the greatest inconvenience."⁴

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DIRECT OBSERVATION OF RUPTURE OF THE GRAAFIAN FOLLICLE IN A MAMMAL*

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The author has been unable to find in the literature a reference to direct observation of rupture of the ovarian follicle. The technical difficulties encountered in attempts to accomplish this can easily be imagined, since the ovary has to be withdrawn from the body and observed for a varying period of time until ovulation occurs.

This paper will briefly describe the material and methods employed in this work and will depict the appearance of the Graafian follicle before, during and after the act of rupture.

The rabbit was used for several reasons. First, this animal does not ovulate spontaneously, but only after copulation. According to Heape, quoted by Marshall in his *Physiology of Reproduction*, ovulation in this form occurs about ten hours after coitus. Moreover, the ovary is of moderately large size and has very prominent follicles when they are ripe.

During the series of experiments, nine operations were done on eight different animals. The

*This investigation has been aided by the National Research Council by a grant from its Committee for Research in Problems of Sex.

first eight attempts were failures. The ninth trial was successful.

The doe was fixed to the animal board about nine hours and a half after copulation, abdomen down. The hair was removed from the flanks on each side and the area cleaned thoroughly with sodium sulphide. Tincture of iodine was used as a skin antiseptic and the operation performed with the usual aseptic technique. In the first eight operations only local anesthesia with one per cent procaine was employed. In addition the last animal was given one-half gram of urethane intraperitoneally just before the first incision was made. This rendered the animal somnolent and prevented struggles that had caused premature rupture of the follicles in preceding attempts.

The position of the ovary in this animal was found to be farther forward than in most cases and for this reason the incision had to be extended cephalad. The posterior part was sewn up to hold the gut inside. On account of a greater degree of hemorrhage than in other cases, the progress was slower than usual, but the ovary itself was finally delivered with very little bleeding from it and the uterine tube.

There were two single and one double or twin follicle on the upper or dorsal aspect of the ovary. The single follicle nearer the posterior pole of the organ was the most prominent and appeared most promising for an early rupture. This one was selected for immediate observation.

Beneath the sterile towels that draped the animal an oil cloth was placed to prevent the normal saline that was kept dripping on the ovary from wetting her and causing lowering of body temperature, though the fluid was delivered from a thermos bottle at a little higher than body temperature.

This last animal had been bred to a vasectomized buck at 5:45 a. m. The operation was begun at 3:15 p. m., using a low power binocular microscope magnifying thirteen diameters. Observation of the follicle was started at 3:50 p. m.

The ripe Graafian follicle in the rabbit is hemispherical, smooth and opalescent. In the center of the outermost portion there is a transparent area and the remainder of the follicle that projects from the surface of the ovary is translucent. There is some vascularization as far out as the transparent region around the outer pole.

As tension within the follicle increases, the transparent portion around the pole begins to

bulge. It now stands out like the nipple on a breast. The bulging increases and the apex of the most prominent part becomes sharper. During this time, with the saline dripping on the ovary and the strong illumination from a 400 watt microscope lamp lighting it, the nipple-like projection is sparkingly transparent and the whole follicle presents an appearance of impending activity. Of a sudden the teat-like projection breaks and a mass like egg albumen gushes forth and falls over on the side of the follicle. Immediately, a spurt of bright red blood darts up from the bottom of the follicle, forms a ring around the edge of the newly formed crater and then cascades down the sides of the follicle. The entire sequence of events requires but a fraction of a minute and is striking to behold. The rupture in this case took place at 3:55 p. m., ten hours and ten minutes after copulation.

The follicle soon becomes filled with blood and shrinks a little after a while in size, at the same time changing from a frank hemispherical to a somewhat cone-shaped structure. The appearance becomes hemorrhagic and all suggestion of opalescence is gone.

Within three minutes after the rupture of the follicle, the posterior third of the ovary was removed and placed in fixing fluid for histological study.

Subsequently, the right twin follicle ruptured through a cone-like projection on one side, though this is the first instance that the bulging was seen to occur in this position; all the others were observed at the outer pole of the hemisphere (some were seen that did not go on to spontaneous rupture).

One hour after the first ovulation, which occurred in the right ovary, the left ovary was removed and placed in fixing fluid.

Further study will be required to determine if follicle rupture and ovulation are simultaneous or if the albuminous material that rushes out and falls on the side of the follicle drags the ovum out later.

Preceding the rupture there is no evidence of muscular contraction around the base of the follicle or anywhere on its surface; the entire region appears to be entirely passive. There is nothing to indicate that the rupture is caused by anything more than a gradually increasing intrafollicular pressure. Further research into this realm is planned.

ENDEMIC TYPHUS FEVER WITH REPORT OF CASES*

S. A. CLARK, M.D.,

Lakeland.

Although endemic typhus fever, or Brill's disease, is reported from time to time from various sections of Florida (116 cases reported in 1924-28, with 60 of these in Tampa and 34 in Jacksonville—and 48 in 1929), the incidence is not sufficiently high for the general practitioner to become familiar with its clinical picture. For this reason, I thought it worth our time and attention to consider two cases of this disease recently occurring in my practice as well as to consider its relation to Old World typhus and also its transmissibility.

As we recall our former text book pictures of typhus, it for centuries has been the scourge of the race, especially during the sixteenth and eighteenth centuries, and at times decimating armies and extending into the civilian population, and of which it has been said that Napoleon was more afraid than he was the armies of his enemies. Tice estimates that even recently more than a million people have died of typhus since the beginning of the World War in 1914. The mortality in these epidemics have varied markedly as shown by the fact that an epidemic in Servia in 1915 reached 60% while one in Russia in 1920 only showed 7%.

In the New World a fever belonging to the typhus group has existed in Mexico since the 16th century continuously and at times has wrought havoc with its armies as well as its population. The United States has been more fortunate and epidemics of only small proportions have occurred. These have been mainly the Atlantic coast cities with some in the Rio Grande and western Indian reservations, the last one having been in New York in 1892, in which several hundred deaths occurred. From 1897 to 1910, the United States was supposed to be free from typhus.

In the latter year, Brill of New York recognized a disease existing endemically which corresponded to typhus in its clinical manifestations. Following his announcement, cases were reported from various sections and cities, especially along the Atlantic coast line, and in 1923 a number of cases were reported from among the native population of Alabama, in which the chances of connection with imported cases was almost impossible. From 1922 to 1928, 811 cases were re-

ported in Alabama, Georgia, and Florida. The types of these cases were similar to those recently seen by myself, and so I will now give you these:

Case No. 1. O. M. A well-developed, healthy, white chap of 13, with no history of former illnesses, was taken suddenly ill on August 16th with chill, fever, and general aching. When seen the first time, next morning, examination revealed a flushed face, eyes slightly congested, a temperature of 104, and pulse approximately 100. His throat was free from irritation, no evidence of congestion in his lungs, and heart normal except increased rate, and abdomen free from tenderness or distension and no nausea or vomiting. On the 18th, his temperature reached 105 and remained there without as much as one degree variation for a week. On the 10th day, he had a morning remission, and by the 13th was entirely free from fever. On the morning of the 5th day of his attack, there was present a maculo-papular rash which had developed the night before and was most marked on his trunk and which by the next day covered rather thickly the entire trunk, back and front, and all of his limbs including the palms of his hands. This rash persisted through the febrile stage taking on more of a petechial type the last few days. It was not present on the face. His mental condition remained clear through the attack, with only once or twice some random talking during sleep.

On the third day a blood smear was negative for malaria. On the 6th day typhoid test negative, also Weil-Felix and undulant tests were negative. On the 9th day typhoid, para-typhoid, B. Abortus and Felix-Weil were all negative. Convalescence was rapid and complete.

Case No. 2. S. E. M. Age 43, father of aforementioned boy, developing in the same room on the same day. Occupation, dairyman. This patient ran a course exactly as the one described above except that his temperature was about 1½ degrees lower, and more mental foginess. On the 9th day he developed a rather marked cyanosis with some heart irregularity, and a temporary albuminuria. The time of his eruption and its distribution and disappearance corresponded to that of his son. All other blood tests in his case were negative except Brill's, which was positive.

As you will note, the diagnosis of the first was not confirmed by the laboratory, but as it was absolutely typical and as it sometimes is rather late in the disease when agglutination takes place,

*Read before the Florida Midland Medical Society, Orlando, Oct 8, 1930.

and with another positive by his side, I feel sure of this diagnosis.

The outstanding symptoms were sudden onset without prodromal symptoms; high continuous temperature without morning remissions; early development and persistence of the rash; distribution of rash, and absence of those characteristic symptoms that usually occur in measles, meningitis, and typhoid.

Through the years in Europe and Mexico, typhus has been associated with overcrowding, filth and insanitary conditions, but not until 1900 was it shown that blood injected from one patient to another would produce the disease, and not until 1909 did Nicoll and his workers demonstrate that the body louse could transmit the virus direct from man to animal and also from man to man.

The question now for solution as a basis for our prophylactic measures is: Are we dealing with the same disease that exists in Europe and Mexico, and is it transmitted by the louse from man to man?

Laboratory workers have found that virus from any of the three sources, Europe, Mexico, or the United States, will produce an immunity, one for the other. They have also shown that there is a reaction involving changes in the serum which enables them to distinguish the States type from the European, and also that the brain in Brill's disease does not show the typhus nodes as are constantly present in the Old World type. The Weil-Felix test gives an agglutination reaction to all three types and was thought not to give it to other febrile cases, but during the past year Kerlee has shown that Rocky Mountain spotted fever will also give this reaction, and it had been classed differently from an immunological standpoint.

As to transmission direct from man to man, investigation of those cases occurring in Tampa, Jacksonville, and Savannah, have failed to connect any case with a previous case, though two cases at times have developed in one family at the same time as occurred in the two cases just reported; nor has close examination revealed any evidence of body lice in any of the cases; the majority of these cases have occurred in a good middle class of citizens in which health and sanitary measures were reasonably good. The larger per cent of cases have occurred in summer or fall, contrary to the winter and spring prevalence in Europe.

The following conclusions were reached by these investigators: that there exists in the United

States a disease resembling Old World typhus, giving a positive Weil-Felix, the original source of which was probably there, but which may be differentiated by certain guinea pig reactions. They do not believe that the facts and conditions surrounding our endemic cases warrant the conclusion that our cases are transmitted by the body louse direct from man to man, but suggest the possibility of an outside host from which occasionally some blood-sucking parasite may transmit to man and suspect the rat of being this host.

These conclusions appear rational and take away some of the dread that naturally we would have if we felt that it was transmitted as easily and as frequently as occurs in Europe.

Many of the above facts and opinions have been quoted from a recent bulletin by Past Assistant Surgeon K. F. Maxcy of the U. S. Public Health Service.

SOME REASONS WHY THE OCULIST SHOULD DO REFRACTIONS IN PATIENTS WITH LOWERED VISION*

E. W. PEERY, M.D.,
West Palm Beach.

As defective vision may be due to diseases of the fundus of the eye, not all cases can be benefited by the use of glasses. These disorders, not easily recognized except by one who is an expert in the use of the ophthalmoscope, may be local or due to constitutional disease. So the general practitioner should, and most of them do, refer these cases to the oculist or specialist in eye diseases, and the optician should do the same.

I make this statement only for the best interest of the patient and do not wish to antagonize the optician. Oculists need their help and cooperation. Perhaps in most cases no harm results from having the optician examine the eyes for glasses, especially in patients over fifty years of age, but disease causes lowered vision in many cases. In all younger patients, a mydriatic should be used to uncover excessive accommodation. The latter procedure gives best results in these cases and a better opportunity to study any possible disease of the eye grounds. I will mention briefly some of these disorders.

In all cases, certain conditions may be present from which serious harm may result in a very few days. Only those who have made a special study

*Read before the 4th Annual Meeting of the Florida East Coast Medical Association, Melbourne, Oct. 2, 3, 1930.

of these conditions can recognize them, and, in collaboration with the technician and the general practitioner, can restore vision, save what vision is present in other cases, avoid serious or complete loss of vision, or the complete loss of the eye and sometimes of life itself.

These diseases fall into two groups; non-inflammatory diseases and inflammatory diseases due to contagious and infectious disorders.

Of the non-inflammatory we may have paralysis of accommodation due to many causes. Sympathetic paralysis is most frequently due to tumors of the neck such as goiter or enlarged lymphatic glands; more rarely to operations on the neck, lesions of the spinal cord, or sometimes neuritis of the cervical nerve plexus. . . . Glaucoma simplex, the slow chronic type that gives no external manifestation of inflammation, can be recognized only by means of the ophthalmoscope. There will be found slight hypertension, cupping of the disc, and the cornea is also found less sensitive. This type is without pain and may be found in young people. Opacities of the lens and vitreous also may be mentioned in this class. Diabetic cataract usually develops rapidly and is always bilateral.

We may have opacities of the vitreous without external or inflammatory signs. Detachment of the retina, due to various causes, may also be mentioned in this connection. A serious detachment may develop in high myopia. Certain tumors of the retina or nerve, in their first stages, will cause decided lowering of the vision without any external signs and can be recognized only by the use of the ophthalmoscope. In some of these, if not recognized early, we will not only lose the eye, but, as I have said before, the life of the patient. It is only necessary to mention here, glioma, sarcoma, endothelioma and angioma occurring as primary tumors of the choroid and retina.

Amblyopia from chronic poisoning by tobacco, methyl alcohol, quinine, lead, salicylic acid and other substances can be recognized only by the physician who has made a special study of the eye and associated diseases. We may have an amblyopia in certain metabolic changes, due to a form of autointoxication.

Lowered vision which would not be recognized by the optician or general practitioner, may be due to arteriosclerosis with occlusion of the vessel of the optic nerve, as in embolism or thrombosis, and to rupture of the retinal vessels.

Let us now consider some *inflammatory* conditions of the eye which seriously affect the vision without showing any external signs of disease.

Inflammation of the choroid coat of the eye may remain confined to this membrane and produce neither external evidence of inflammation nor pain. Choroiditis centralis is characterized by changes occurring in the region of the macula lutea. The most frequent cause of this is probably myopia, which, if of high degree, leads late in life, almost without exception, to changes in the yellow spot, mainly of an atrophic nature. Sometimes there is found in old people a disease of the macula which usually affects both eyes and is referable to senile changes. The retina, of course, lies immediately over the choroid and is also affected in the same areas in acute inflammations. Exudates from these areas may pass into the vitreous, causing more or less opacity there.

Exudative choroiditis is a frequent disease which is observed at all ages. Among its most ordinary causes is syphilis, both acquired and hereditary; general disorders of nutrition, such as anemia, tuberculosis, scrofula, gastro-intestinal toxemia; dental, tonsillar, sinus or other focal infections.

Another condition of the choroid affecting vision (though not inflammatory) is primary choroidal sclerosis. The etiology is obscure, but syphilis, arteriosclerosis, nephritis and menstrual disturbances have been assigned as causes.

We may have miliary tuberculosis of the choroid. This disease will lower the vision but is more essentially of diagnostic interest. Its nature, however, should be recognized early.

Retinal hemorrhage may often cause serious loss of vision without any external signs. . . . Retinitis, of course, seriously affects the vision and this again is recognized only by the means of the ophthalmoscope. It is due to many causes, a few of which we might mention. Neuro-retinitis from intracranial diseases, diabetic retinitis, leucocythemic retinitis and luetic diseases. These cases are still more complicated if albuminuria exists.

Optic neuritis may develop anywhere along the optic tract, showing changes in the papilla, or it may be a retro-bulbar affection. Brain diseases are the most frequent cause of optic neuritis. Syphilis is a frequent cause either through brain disease causing pressure, or by directly affecting the nerve. In retro-bulbar neuritis we later have the ophthalmoscopic findings of nerve atrophy.

Toxic amblyopia may interfere with vision in various ways;—by causing paralysis of the extraneous eye muscles, of the sphincter pupillae, and of the muscles of accommodation, or, by causing disease of the retina and nerve.

We may have a congenital amblyopia of a certain type, when all causes can be excluded, and especially when other congenital anomalies are present in the amblyopic eye, such as an extreme degree of hyperopia or astigmatism. This may be called amblyopia from non use.

Uremic amblyopia may occur in any form of renal disease, but is more common in the acute nephritis of the eruptive fevers, especially scarlet fever, and also in pregnancy.

Glycosuric amblyopia may cause paresis of accommodation, cataract, premature presbyopia and the need of frequent changing of lenses.

Malaria amblyopia is due to the action of malarial poison upon the optic nerve and retina.

Amblyopia may occur from loss of blood, most commonly from the stomach as from gastric ulcer. This may be only a temporary blindness due to impoverished blood supply of the visual centers, or there may be permanent loss of sight from atrophy of the optic nerve.

This paper may cause some criticism, but I believe it is timely, and that conscientious physicians, having the interest of their patients at heart, will agree that the old adage is true: "Tis better to be safe than sorry," and will so use his influence that the well-trained oculist may be consulted in cases where so important an organ as the eye is losing its function.

CLASSIFICATION OF ARTHRITIS WITH SPECIAL REMARKS ON CHRONIC INFECTIOUS TYPE

S. H. ETHEREDGE, M.D.
Tampa.

Arthritis probably ranks first among the chronic disabling diseases. The economic importance of it is hardly estimable. This chronic disabling disease dates back as far as history records. Man alone is not the only victim of this disease but animals are also afflicted. There has been much work done and much money spent investigating arthritis and as yet there is a great deal to be learned about it. Among the medical profession the term arthritis is used to denote disease and abnormalities of the skeletal joints. The term is in keeping with medical nomenclature, and as a name, it is correct.

If one should attempt to classify arthritis or refer to its classification, he would immediately find himself in a vast confusion. Some classifications are based on pathology, some on etiology, some mixed and some without apparent reason. Because of confusion in classification and the importance of the subject, I have attempted to give a simple classification based on etiology. I think most cases of arthritis will fall into one of the groups mentioned below.

I. Chronic Infectious Arthritis. Non-specific. This type is generally called hypertrophic, atrophic or arthritis deformans. I shall refer later in detail to this type.

II. Specific Infectious Arthritis. This group of arthritis includes the joint infections with certain known bacteria. Under this group we place gonorrheal arthritis, typhoid arthritis, pneumococcic, streptococcic arthritis, tubercular arthritis, etc. This group is almost always associated with systemic or focal disease or may be the result of trauma and infection as osteomyelitis. Arthritis with acute rheumatic fever and Perthe's disease should fall in this class although we are not sure of their cause.

III. Traumatic Arthritis. This group includes various injuries to joints due to trauma. This type is frequently seen following fractures about the joints. It also may occur in obese persons where the excess weight adds a strain on the knee joint, ankle joint or spine. It is not associated with infection.

IV. Metabolic. In this group, gout is the outstanding lesion. This is entirely due to products of metabolism, chiefly uric acid compounds thereof being deposited in the joints. Rickets and osteogenesis imperfecta probably fall in this class.

V. Senile Arthritis. This comprises the common complaint of elderly people, the involvement usually occurring in the phalanges with deformities and joint fixation. This group is not well understood and is so classified because it does not fit the other groups. It has certain features of the chronic infectious type but is not as severe.

VI. Arthritis due to Metastatic Malignancy. This is self explanatory.

VII. Arthritis Associated with Organic Nervous Diseases. This group is in reality traumatic arthritis due to either muscular weakness and atrophy or due to loss or lack of muscle sensation. In this group, poliomyelitis, tabes dorsalis, syrio

myelia, combined sclerosis and multiple neuritis are the most common.

Under the above headings, we can usually place any case of arthritis. The classification does by no means insinuate that the etiology is always known or can be classified. A better classification of our cases would mean better treatment. I would like to discuss the characteristics of the different types of arthritis but it is not within the scope of this paper and could well be the subject of a book.

CHRONIC INFECTIOUS ARTHRITIS— NON-SPECIFIC

This group is by far the most important of the arthritides. Its number of invalids is appalling and its victims are chronic invalids. As I mentioned previously, this type is commonly called arthritis deformans, either atrophic or hypertrophic as the case may be.

The etiology of this type is not known. It attacks both young and old and without regard to sex, race or climate. Various workers have at times defined its cause only to be proven wrong. Among the theories are: achlorhydria, hypoglycemia, intestinal toxemia, focal infection, moist, cold climate, glandular deficiencies and metabolic disturbances. I shall not attempt to disprove or prove any of the above but will state my belief.

Patients with chronic infections are often poorly nourished, have gastric disorders, constipation, often focal infection and dietary fallacies. I am inclined to believe there are several factors in producing arthritis. A lowered vitality from any cause would be a predisposing factor. In the face of lowered resistance, the bacteria of focal infection seem to be disseminated thru the blood stream and settle in the joints. I would have to believe in bacterial selectivity to adhere to this claim and although this has not been proven, I believe it offers the best explanation up to the present time.

The pathology of chronic infectious arthritis is that of inflammatory reaction within and around the joints with bony atrophy or hypertrophy, often an increase in the synovial fluid and deformity and fixation of the joint. Bacteria, particularly streptococci, have been cultured from synovial fluids and periarticular tissues, but not with consistency and the organisms have not consistently produced arthritis experimentally.

Infectious arthritis may be subacute or chronic; it is rarely very acute. The diagnosis is not very difficult. Multiple joint involvement is the

rule; rather slow onset and progress; not much systemic reaction and the joints involved almost always damaged, often to great extent, particularly the joints of the extremities being rendered helpless.

TREATMENT

Basing my treatment on what I consider its etiology, it consists of (1) removal of cause (2) treating affected joints (3) general systemic measures to improve the patient's health.

As to removal of cause, I believe radical focal eradication should be done. By that I mean the removal of devitalized teeth, broken roots, treating pyorrhea and removal of tonsils, regardless of their appearance or history, investigation of sinuses, prostate and cervix. Any evidence of infection should be removed. I do not believe that the appendix or the gall bladder are very often the offenders and would not advise their removal unless there were definite pathological findings and would then be doubtful as to their connection with arthritis.

Following the removal of the apparent cause, the next step would be to treat the joints affected. This is done by diathermy, dry heat, gentle massage, and slight passive motion. With this I would employ a foreign protein shock. I use typhoid vaccine intravenously, giving enough to produce distinct systemic reaction, with chills and fever. This should be repeated at least four times at periods of from three to four days. If, after four injections, improvement is not seen, they should be stopped. I have not mentioned drugs and can well leave that part out. I know of none with curative value. The salicylates may be of value; systemic alkalies are worth a trial at intervals. In spite of treatment the case may not materially improve. We should try to put a limb in as useful position as possible if ankylosis seems inevitable. Whenever possible, an orthopedist should be in attendance.

Most of us are hasty in treating these cases and get discouraged, as does the patient. The disease is chronic and the treatment should be as chronic as the disease. One reason it is chronic is because after removal of what we think is the cause, the joints probably are likewise infected and may act as a focus.

General hygienic measures should be looked after; the poorly nourished should be built up; constipation corrected; fresh air, sunshine and fairly regulated temperature maintained. I do not advise any qualitative diet.

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PRE-CONVENTION MEETING

An informal pre-convention meeting took place in Jacksonville at the Windsor Hotel, February 23rd at the call of our president, Dr. Julius C. Davis. Twenty-seven doctors from different parts of the state were in attendance. The Executive Committee met in advance and took action on a number of important matters. The Scientific Program Committee very carefully studied the forty-eight applications for places on the program at the Orlando meeting and selected twenty-two from this number. The time limit during the annual meeting for the scientific program compelled the committee to a limit of twenty-two. Quite a large number of excellent papers were offered which could not be accepted because of duplication in subject matter or for lack of time at the convention. The Committee on Publica-

tion is in hopes that the papers which could not be included will be offered for publication in the Journal in order that the readers of our official publication may have the privilege of the information contained in these excellent articles. A brief report was also given by the chairman of the Committee on Medical Education and Hospitals. The Advisory Committee to the Woman's Auxiliary also made a brief report. A special committee appointed by the president, as recommended by past president, Dr. Henry C. Dozier in his presidential address, as an auxiliary committee to the Executive Committee on medical education of the laity, discussed ways and means and made a very brief informal report at the general meeting. Dr. Dozier was elected by the auxiliary committee as president and Dr. J. Ralston Wells of Daytona Beach as secretary.

Quite a number of the councilors were present, read their reports and submitted them for publication. A number of councilors who could not attend the meeting mailed their reports which were read by the secretary of the Association and submitted for publication. These reports appear below.

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Holden, Gerry R.	Jacksonville
Irwin, J. M.	St. Augustine
Jobson, A. M. C.	Tampa
McKinnon, D. A.	Marianna
Manning, W. S.	Jacksonville
Palmer, Henry E.	Tallahassee
Rice, Samuel D.	Gainesville
Spiers, W. H.	Orlando
Taylor, H. Marshall	Jacksonville
Waas, Fred J.	Jacksonville
Warren, E. W.	Palatka
Webb, C. C.	Pensacola
Wells, J. Ralston	Daytona Beach

FIRST DISTRICT—J. M. HOFFMAN, M.D. . . *Pensacola*
Okaloosa, Walton, Santa Rosa, Escambia.

As Councilor for the first district of the Florida Medical Association which comprises Walton, Okaloosa, Santa Rosa and Escambia Counties, I hereby submit my report for the year 1930-1931. Walton and Okaloosa counties are organized into one society known as the Bi-County Society. Santa Rosa County practitioners are members of the Escambia County Medical Society.

The Bi-County Society has a membership of nine. They meet once a month with well attended meetings either at Crestview or DeFuniak Springs. An active interest is shown by all members. This Society is usually one of the first in the State to have a complete paid-up membership for the year. On the occasions of my visits to this Society, the members have shown an active interest in the affairs of the State Association and have asked me to confer with them before the State Association meets, that their delegate may be properly instructed to discuss and to vote on the questions that may arise. All eligible practitioners in these two counties are members of this Society.

Escambia County Medical Society has a membership of 38 with one honorary member. Six new members have been added since January 1, 1930. One member has moved and one died. The Society meets once a month regularly and has also had several special meetings. The meetings have been well attended and cases presented have been well discussed. Due to the splendid activity of the State Association office in selling exhibit space at the 1930 Convention, the Society was able to pay all expenses without extra assessment. Several of the members have given health talks on several occasions to P. T. A. meetings and similar lay gatherings. All eligible practitioners of medicine are members of the County Society. The alleged practices of several irregulars and unlicensed individuals in this County are now under investigation, but with little hope of a successful prosecution due to the lack of cooperation of the County prosecuting officers and the lack of funds.

The activities of an undergraduate medical student in Santa Rosa County has been reported to the State Board of Medical Examiners for investigation. Through the cooperation of the State Board of Health, the dismissal of the local

registrar of Vital Statistics, who is the wife of an alleged unlicensed practitioner, was effected.

Through the State Board of Health, and the Childrens' Bureau of the Department of Labor, Dr. J. R. McCord, Professor of Obstetrics at Emory University, delivered a five-day series of lectures on obstetrics at Pensacola, recently. The lectures were well attended by non-members as well as members in this District. This series of lectures was the inspiration of the organization of a colored pre-natal clinic in Pensacola.

The medical affairs in this District are in excellent condition, with the members taking an active part in scientific discussions, and a keen interest in the affairs of the State Association and organized medicine.

SECOND DISTRICT—O. G. KENDRICK, M.D.,
Tallahassee
Liberty, Gadsden, Jefferson, Wakulla, Leon, Franklin.

The second district of the Florida Medical Association is composed of Leon, Gadsden, Liberty, Wakulla, Jefferson and Franklin Counties. Last year there were about thirty-two physicians in this area and twenty-four were members of the District Society. This year we have hopes of being able to get nearer one hundred per cent. Meetings are held quarterly, rotating from the cities of Monticello, Tallahassee, Quincy and Chattahoochee.

At the December, 1930 meeting, which was held at the State Hospital, in Chattahoochee, Dr. J. F. Williams, of Monticello, was elected president for the ensuing year, and Dr. O. G. Kendrick of Tallahassee, was elected secretary and treasurer. Quite an active interest is demonstrated by those members who attend the meetings, and excellent programs, followed by a luncheon, make the members and visitors look forward to the next meeting. As a rule, we try to have one or two guest papers on the program along with papers by local physicians.

SEVENTH DISTRICT—J. RALSTON WELLS, M.D.,
Daytona Beach
Brevard, Volusia, Seminole.

The three component Societies, Brevard, Seminole, and Volusia, have been visited.

Due to the population of the three cities, Daytona Beach, DeLand and New Smyrna, Volusia County has the largest Society. Attendance in this Society will average about 70%. The scientific papers have been rather few and desultory, but for the year 1931 a new plan has been

adopted whereby every member will have been required, by the end of the year, to present a paper or a case. Dr. McCord delivered a 5-day course on obstetrics for DeLand, New Smyrna, Sanford and Daytona Beach which was excellent but not well attended.

Brevard County by reason of the population of the small towns and the distance to be traversed by the various doctors to the meeting place is to be congratulated upon its attendance. The Society itself is in harmony and is doing good work. Some of the individual members have been annoyed by the actions and the practices of a non-member physician, who, they report, is guilty of renegade practices and twenty-five cent medicine. A.M.A. pamphlets on medical ethics were procured and forwarded to this Society.

Seminole County has an excellent enthusiastic Society, which turns out almost 100% in attendance. They are working harmoniously and apparently doing good work.

As a whole, I think I may report that District No. 7 is in a healthy condition, is practicing ethical medicine, and is working congenially.

TENTH DISTRICT—G. C. OVERSTREET, M.D., *Lakeland*
Polk.

I attended a meeting of the Polk County Medical Society recently, which as you know comprises the tenth district, of which I am Councilor.

The secretary of this Society advises me that as far as he knows there is not a single practitioner eligible for membership in the Polk County Medical Society who is not a member, although there are several who have not paid their 1930 dues and are, therefore, not in good standing.

I anticipate being able to attend the meeting of officers, committeemen and councilors in Jacksonville next week. If unable to attend I will submit my report as requested.

I trust I shall have the pleasure of meeting you some time soon and assure you of my cooperation in any matters pertaining to the furtherance of organized medicine.

TWELFTH DISTRICT—W. H. GRACE, M.D., *Ft. Myers*
Glades, Charlotte, Hendry, Lee, Collier.

As Councilor of the twelfth district, which comprises the counties of Glades, Charlotte, Hendry, Lee, and Collier, I have been in communication by letter with every Doctor in the district who is eligible for membership. With the exception of Lee County, there are not enough physicians in the four other counties to form a medical

society. For this reason, it is very difficult to stimulate interest in attendance at district meetings. Then too, for the most part, these physicians are located quite a distance from our city and some of them would have to make the trip over bad roads. However, Dr. Stebbins of Charlotte County, holds membership in the Lee County Medical Society.

The Lee County Medical Society holds its regular meetings the third Friday evening of each month at the Lee Memorial Hospital. For the sake of variety, and to stimulate interest, sometimes the meeting takes the form of a dinner. We have an average attendance of 90%, all but two of the eligible physicians of the County being members. We have gained one new member this year, which brings our membership up to eleven members. Twelve regular meetings were held the past year and one called meeting. We endeavor to have interesting, constructive meetings, with a scientific paper by a member, followed by discussion of the subject. I think that our percentage of attendance proves that the meetings are well worth the time devoted to them.

THIRTEENTH DISTRICT—

ALEX. M. C. JOHNSON, M.D. *Tampa Hillsborough, Hernando, Pasco.*

Hernando and Pasco Counties have well attended meetings on the second Tuesday, the meeting place varying as first one member and then another will entertain the society. They present, usually, one scientific paper, then quite a few clinical cases which are freely discussed. The members seem to be very much interested in the state association and are willing to cooperate in any manner that they may. A few members have been lost thru suspension for non-payment of dues. They are especially confident of regaining these members.

Hillsboro County has its meetings on the first and third Tuesdays of each month, the attendance being very good. From one to several papers are presented at each meeting; several outstanding men having been entertained during the year with presentation of papers.

Quite a few new members have been taken in and several have been suspended, temporarily, for non-payment of dues. The work in the society has been very satisfactory for the past year and the morale of the society seems to be improving and we are all trusting for a better scientific in-

terest for the coming year with full cooperation for the state association in any manner that they may be called upon.

FOURTEENTH DISTRICT—D. A. MCKINNON, M.D.,
Marianna Calhoun, Jackson, Gulf.

The Jackson County Medical Society meets the second Tuesday evening in each month at the Chipola Hotel, Marianna. Have dinner, occasional papers. Always round table talks discussing recent cases. Average attendance at meetings seven. At February meeting officers for the ensuing year elected: D. A. McKinnon, president; T. H. Hudgens, secretary. Delegate to Florida Convention, W. C. Box, Graceville; alternate, D. A. McKinnon, Marianna. The secretary has notified all eligible members with an earnest request to pay dues at the next regular meeting in March.

During my visit to Bay County I was informed they had a County Medical Society, but had been very inactive for the past two years. Inclination to renew interest was shown by some but admitted faction was an element that interfered with progress.

FIFTEENTH DISTRICT—C. W. SHACKELFORD, M.D.,
West Palm Beach Palm Beach, Broward.

As Councilor of the fifteenth district, composing Broward and Palm Beach counties, I submit the following report:

It is with much pleasure that we see Broward County Medical Society has been active. There are eighteen paid up members. One left the county the latter part of the year. One asked to be stricken from the roll on account of bad health. There were nine meetings held out of twelve scheduled. One special meeting. Twelve scientific papers were read. Two dinner meetings and one luncheon were held for guests of the society and visiting doctors in town.

An average attendance of 60% for the year.

The following officers were elected for the ensuing year: Doctor Ralph Lingeman, president, Fort Lauderdale; Doctor A. C. Brown, vice-president, Fort Lauderdale; Doctor Anna Darrow, secretary-treasurer, Fort Lauderdale; and Doctor H. G. Peavy, Fort Lauderdale, representative, House of Delegates, State Convention.

The affairs of the Palm Beach County Medical Society are not satisfactory. The majority of

the members seem indifferent to the life of organized medicine. We have used various methods to stimulate interest in the society, but with little success.

At our December meeting we had twenty-two members present. But this was annual election of officers and a banquet preceded the election. Also, at this meeting the society went on record as opposing illegal practitioners and voted to employ an independent attorney to handle the P. C. Ronning case. Ronning's license was revoked by the Florida Medical Examining Board in November 1927. He continues to practice as a Doctor of Medicine, contending that the revocation was illegal. The state association should see that legislation is enacted to expediate the handling of such cases.

The Palm Beach County Medical Society has forty-four members enrolled. Thirty-eight have paid their dues. We lost eight members through death, removal from the county, and non-payment of dues. Two new members were added. There were eight meetings held out of twelve scheduled. Only two scientific papers were read during the year. The average attendance was less than 35%.

We have adopted the plan now of holding our county meetings immediately following the Hospital Staff meetings. As a result of that our January meeting was the largest we have had in more than a year so that perhaps may solve our attendance problem.

For the ensuing year the following officers were elected: W. Lawson Shackelford, M.D., president, West Palm Beach; Lloyd J. Netto, M.D., vice-president, West Palm Beach; George M. Dawson, M.D., secretary, West Palm Beach; and Grace E. Papot, M.D., treasurer, West Palm Beach.

SIXTEENTH DISTRICT—S. C. Wood, M.D., *Leesburg*
Sumter, Lake.

The affairs of the Lake and Sumter Medical Societies, comprising the Sixteenth District, are running along smoothly.

The Lake County Society has a membership of fifteen and meets regularly on the first Thursday of each month at Eustis. The attendance at these meetings is good. Usually one paper is read and discussed.

There are only four members in the Sumter County Society and they do not meet regularly. They hold several meetings during the year and

frequently visit the societies in neighboring counties.

There are nine doctors residing in the Sixteenth district who are eligible for membership in the Societies. So far we have been unable to secure their application and fee for membership. Two of them state that the reason they do not apply is because the state dues are too high.

SEVENTEENTH DISTRICT—

SPENCER A. FOLSOM, M.D., *Orlando*
Osceola, Orange.

As Councilor of the Seventeenth District, I attended the last meeting of the Orange County Medical Society (Orange and Osceola Counties). Through the secretary I obtained the information that the following physicians in this district are eligible but not members of the society: Dr. Hand of Holopaw, Dr. Kleiser of Orlando, Dr. Davis of Winter Garden.

EIGHTEENTH DISTRICT—H. GATES, M.D., *Manatee*
Manatee, Sarasota.

The following is my report as Councilor for Manatee and Sarasota County Medical Societies:

This last year has been one of active and interesting meetings.

We have met once a month in joint sessions at the Country Club of Whitfield Estate, located between the towns of Sarasota and Bradenton.

There has been a healthy rivalry between the societies in furnishing papers of interest. One society furnishes the program with a paper from one member and discussion by all. At the next meeting the other society furnishes the program. After business sessions we usually have a light banquet and a social feature.

All the Doctors of Sarasota County are members except one who would not be acceptable if he made application.

All the Doctors of Manatee County are members except three. Two have been members but have dropped out; the other is a new man who will become a member soon. All our members are congenial and our ties of friendship are strong.

TWENTY-FIRST DISTRICT—H. D. CLARK, M.D.,
Ft. Pierce
St. Lucie, Okeechobee, Indian River, Martin.

As Councilor for the twenty-first district which comprises Indian River, Okeechobee, Martin and St. Lucie Counties, I wish to report that we have had a very quiet year and have added only one new member.

We have had several very enjoyable meetings during the past year, all of which were well attended.

We regret that there are several very desirable physicians in the district who are eligible for membership who are not members.

This is probably due to the fact that we have only one small society in the district and the men do not like to drive so far to attend meetings.

We hope to improve our programs during the next year to such an extent that all of the men in the district will be glad to attend and become active members.

The Four County Society is unanimous in its thanks and appreciation to our president, Dr. J. A. Newham and our secretary, Dr. C. L. Davis for their services during the past year.

(All written reports from councilors received since this Journal went to press will appear next month.)

THE CHILDREN'S HOME SOCIETY

The Children's Home Society of Florida, with headquarters at Jacksonville and Branch Receiving Homes at Miami, Lakeland and Pensacola, is looking for about one hundred good hearted families in Florida, who will give a good home to one or more homeless boys and girls, from six to sixteen years of age. Scores of these utterly homeless children are pleading for love, care, education and a good home. Many of them prefer homes in the country, or in small villages or towns, as they were reared in similar places.

Full information will be given about the family history of each child, about the child itself, and all children are placed for a full year on trial before any permanent arrangement is expected. Legal adoption is not necessary.

The Home Society started the year of 1931 with 863 children under its care and attention, and had 133 new children referred for care during January. The only way that the Society can make room for new homeless and orphan children is for the present children to be placed in good family homes.

For full information write Marcus C. "Daddy" Fagg, 428 St. James Building, Jacksonville, Florida.

Remember, you can never perform a more worth-while service in all this world, than to give some little homeless child a good home. Who will be the first to offer a child or two a home?

STATE NEWS ITEMS

The regular quarterly meeting of the Florida Dermatological Association was held in Miami, February 8th with Dr. Elmo D. French of Miami, chairman, and Dr. J. Frank Wilson of Jacksonville, secretary. Several clinical cases were discussed during the session. Physicians going to Miami for the meeting included Dr. F. W. Cregor, Indianapolis, member judicial council, American Medical Association; Dr. Fred Wise, New York, past president, American Dermatological Association; Dr. C. A. Andrews, Tampa; Dr. J. J. Saxton, Tampa; Dr. J. Frank Wilson, Jacksonville and Dr. J. L. Kirby-Smith, Jacksonville.

* * *

Dr. J. Knox Simpson, Jacksonville, gave a vocational talk recently before the Rotary Club at the Mayflower Hotel.

* * *

Dr. William H. Daniels, formerly of the University of Maryland, is now connected with the Tumlin Clinic at 315 Olympia Building, Miami. Dr. Daniels' specialty is orthopedic surgery.

* * *

Dr. and Mrs. C. W. D'Alemberte of Pensacola recently returned from a trip through south Florida.

* * *

Born to Dr. and Mrs. T. E. McBride of Apopka a boy, February 4th. The name of the new arrival is Paul Craig.

* * *

Dr. Donald Babcock, formerly of Miami, has moved to 727 West 7th Street, Los Angeles, California.

* * *

Dr. W. E. Sinclair, Orlando, attended the White House Conference on Child Health and Protection in Washington recently.

* * *

The regular monthly meeting of the Pasco-Hernando-Citrus County Medical Society was held at St. Leo recently. Dinner was served preceding the meeting. Dr. A. M. C. Jobson of Tampa, councilor for the thirteenth district, was the honor guest and in addition to attending the meeting officially as councilor, Dr. Jobson read a very interesting paper.

* * *

Dr. Alvyn White has recently located in Pensacola giving special attention to pediatrics.

The Pinellas County Medical Society held its regular bi-monthly meeting Friday, February 13th, at St. Petersburg. Two very interesting papers were read and discussed; the first by Dr. Alfred Friedlander, Professor of Medicine, University of Cincinnati, College of Medicine, on "Low Blood Pressure" and the second by Dr. C. C. Coleman, Professor of Neurological Surgery, Medical College of Virginia, Richmond on "General Observations in the Diagnosis and Treatment of Brain Tumors."

* * *

Dr. Harold M. Golden, formerly of Tampa, has moved to Chicago where he is specializing in oral and plastic surgery.

* * *

Dr. L. W. Glatzau, formerly of DeLand, has located in Jacksonville. Dr. Glatzau recently took post-graduate work in ophthalmology at the University of Vienna in Vienna, Austria, but has now resumed practice and will be located in the Professional Building, Jacksonville.

* * *

Dr. William B. Clark, formerly of Ocala, has moved to 1704-7 Pere Marquette Bldg., New Orleans, La., where he is associated with Drs. Victor C. Smith and Chas. A. Bahn and limits his work to diseases of the eye.

* * *

Dr. L. J. Arnold has just returned to Lake City after spending four months in Washington, D. C. taking post-graduate work in the U. S. Diagnostic Center.

* * *

Dr. A. C. McKenzie, Jacksonville, recently left for the United States Veterans' Bureau, Washington, where he passed examinations and will remain until spring.

* * *

Dr. V. M. Jared of West Palm Beach died at the Good Samaritan Hospital, West Palm Beach, February 22, 1931, following an operation for acute appendicitis.

* * *

At the regular meeting of the Putnam County Medical Society held on January 8th, the following officers were elected for 1931: President, Dr. W. S. Miller, Palatka; vice-president, Dr. E. W. Ford, Crescent City; secretary-treasurer, Dr. E. W. Warren, Palatka.

Dr. W. C. Young, Jr., has moved his office from Waldo to Canal Point and will do general practice there.

* * *

At the regular February meeting and dinner of the Brevard County Medical Society held at Indian River City, the following officers were elected for 1931: President, Dr. E. W. Potthoff, Titusville; vice-president, Dr. G. W. Wood, Rockledge; secretary-treasurer, Dr. I. K. Hicks, Melbourne; delegate to House of Delegates, State Convention, Dr. I. M. Hay, Melbourne.

* * *

Dr. H. W. Porter of Jacksonville recently moved his office from 347-8 to 340 in the St. James Building.

* * *

Announcement has just been received to the effect that the Sixtieth Annual Meeting of the American Public Health Association will be held in Montreal, Quebec, September 14-17. The Windsor Hotel will be headquarters.

* * *

The regular meeting of the DeSoto-Hardee-Highlands County Medical Society was held in Arcadia, February 10th. Dr. H. J. Blackman of Tampa read a paper on "Eye Manifestations in Systemic Diseases" and Dr. H. V. Weems of Sebring read a paper on "Chronic Lymphatic Leukemia." There were twenty present including visitors from Tampa and Lee County. The election of Dr. J. A. Simmons of Arcadia as secretary-treasurer and that of Dr. L. W. Martin, of Sebring as vice-president was reversed at this meeting. Dr. M. C. Kayton of Wauchula is president of the Society for 1931.

* * *

The following members of our Association have been appointed official medical examiners for the Citizens Military Training Camps, according to a newspaper announcement recently:

Dr. Francis A. Copp, Dr. James H. Hartman, Dr. Charles L. Jennings, Dr. R. R. Killinger, Dr. W. S. Manning, Dr. G. F. Oetjen, Dr. H. W. Porter, Dr. Clarence D. Rollins, Dr. Raymond Sanderson, and Dr. F. H. Teeter, Jacksonville; Dr. W. D. Brinson, Baldwin; Dr. W. A. Brewster, Callahan; Dr. D. G. Humphreys, Fernandina; Dr. W. B. Parks, Starke; Dr. W. C. Young, Waldo; Dr. L. C. Fisher and Dr. F. P. Key, Green Cove Springs; Dr. G. P. Hammer, Penney Farms; Dr. Seeber King and Dr. J. E. Maines, Lake Butler; Dr. C. D. Whitaker, Raiford.

WILLIAM C. DEWBERRY

Dr. William C. Dewberry, 64, one of Pensacola's best known physicians and druggists, died at his home January 25, 1931, of pneumonia after a short illness. Dr. Dewberry, a native of Butler County, Alabama, moved to Escambia County thirty-four years ago and started the practice of medicine at Gonzalez. From there, he moved to Pensacola where the practice of medicine and his business ability resulted in building up a medical practice as well as a leadership in the profession of pharmacy. He was a director of the American National Bank, a trustee of First Methodist Church, a member of Masonic Lodge 42 and a 32nd degree Mason. Dr. Dewberry is survived by his widow, Mrs. Olga M. Dewberry, one son, W. C. Dewberry, Jr.; four daughters, Mrs. J. S. Hayes, Mrs. A. S. Mills and Miss Ruth Dewberry of Pensacola and Miss Marguerite Dewberry of New York City; one brother, Wiley Dewberry of Savannah, Georgia, and three sisters, Mrs. Lila Cheatcheam, Opp, Alabama, Mrs. Emma Williams and Mrs. N. T. Rhodes, Georgiana, Alabama.

RESOLUTION, PALM BEACH COUNTY MEDICAL SOCIETY

WHEREAS, GOD, in His infinite wisdom, has seen fit to take from among us our beloved friend and fellow-physician, Dr. Vernon M. Jared, and

WHEREAS, Dr. Vernon M. Jared, by his genial personality and whole-hearted friendship has endeared himself to every member of the medical profession in this vicinity and elsewhere; and has through his professional attainments materially contributed to the upbuilding of the practice and art of medicine in Palm Beach County; and through his continued cooperation made the practice of medicine more pleasant for all of us, and

WHEREAS, through the untimely death of Dr. Jared, the Palm Beach County Medical Society has suffered a great loss, and the people of this community have lost the services and ability of a sincere and able practitioner of medicine, be it resolved by the members of the Palm Beach County Medical Society that we hereby publicly express our sorrow and regret at the passing of our beloved friend and fellow physician, and

FURTHERMORE, we direct that a copy of this resolution be forwarded to the wife of Dr. Jared, his mother and brother, and that a copy be sent to each of the papers in this community, and that the original be placed in the archives of this society as a token of our affection.

PALM BEACH COUNTY MEDICAL SOCIETY.

CONVENTION NEWS

The Roentgenologists of Florida will hold their next meeting in Orlando, Monday, May 11, at the San Juan Hotel, beginning at 10:00 A. M. These meetings are strictly informal and each member is cordially invited to bring any interesting X-ray films or lantern slides he may have and to enter into the discussion of these cases. Illuminator boxes, stereoscope, a 16 mm. motion picture projector, lantern, and a 35 mm. still picture projector will be provided.

* * *

Doctors who are interested in meetings of medical fraternities or alumni of medical schools at the Fifty-eighth Annual Convention in Orlando next May are requested to communicate with Dr. G. H. Edwards, chairman of the general committee, who will arrange for suitable times and places for such meetings. Dr. Edwards' address is care Orlando Clinic, Orlando.

* * *

Dr. J. R. Chappell, Box 1370, Orlando, as chairman of the Golfers' Committee, would like to get in touch with all doctors who desire to play at the Annual Meeting in May at Orlando. It is planned to play on Tuesday and award prizes at the banquet that evening.

* * *

Members of the Aero Medical Association will have their special meeting in the form of a luncheon Tuesday noon, May 12th, 12:30, at the Angebilt Hotel.

* * *

The Orange County Medical Society membership has been divided into groups to handle various features of the coming convention in May and it is not only their hope but their expectation that there will be a large number at Orlando to enjoy their hospitality.

FOR SALE—Schellberg Colonic Irrigator never used, complete. Will sell for cash or exchange for a Hospital Operating Table.

THE WOMAN'S AUXILIARY PAGE

WOMAN'S AUXILIARY
TO THE
FLORIDA MEDICAL ASSOCIATION, INC.

State Editor
MRS. EDWARD JELKS,
2244 St. Johns Avenue
Jacksonville

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MRS. J. M. IRWIN, Historian	<i>St. Augustine</i>
MRS. J. E. TAYLOR, Secy.-Treas.	<i>DeLand</i>

HISTORIANS OF FLORIDA'S MEDICAL HEROES—WHERE ARE YOU?

Mrs. S. A. Collom, Texarkana, Texas, president of the Woman's Auxiliary to the Southern Medical Association, has the following to say concerning the work of the Woman's Auxiliary to the S. M. A. for this year: "Our Auxiliary is not a money making or a legislative body, nor strictly a social body, but a clearing house ever creating inspiration, upholding the aims of the medical societies of its states and the American Medical Association, keeping keen our zest, broad our interests, warm our sympathies, responsive our sentiments for life and humanity.

"In doing this, our work this year will be to help preserve the medical history of our composing bodies. The tradition of Southern Medicine is full of interest and romance. The lives of our pioneer heroes of medicine should be written in a form that is accessible for clubs or school programs. Many of the famous men whose statues adorn halls of fame are doctors of medicine. In these heroes' neighborhoods, there are mental pictures of their heroism, of their successes and defeats in those pioneer days. Every patient's mind is an art gallery of their beloved doctor's work. Time has not dimmed the vivid colors of their great achievements. These traditions are the spoken pictures we want to preserve. We are asking that each state which has a medical history already printed send a copy to our historian, Mrs. Augustus Street, Cowan Place, Vicksburg, Miss., with a list of the doctors who are in the halls of fame, from their respective states. Those states

which have not histories will please send historical sketches of their famous doctors.

"From these, our special committee expects to gather romances for our program in New Orleans in 1931, and to preserve these data that they may be accessible for programs." Florida is certainly not lacking in material for such a history; there is our Doctor John Gorrie, whose statue is in the Hall of Fame, there is Doctor Alvan Wentworth Chapman, the great botanist who practiced medicine in Apalachicola for many years and was a friend of Dr. Gorrie's, there is also Doctor J. Y. Porter, who did so much for the Public Health in this State, and there are others. With all this wealth of material, we must not go empty handed to New Orleans in November.

STATE MEETING IN ORLANDO

Mrs. Louis Orr, Jr., Mrs. G. H. Edwards, and Mrs. W. E. Sinclair have been appointed by the Orange County Medical Society, a committee in charge of entertaining the doctors' wives at the State Convention which meets in Orlando in May.

MARION COUNTY

The Auxiliary to the County Medical Society met on Thursday, January the twenty-second, and had luncheon. Following the luncheon, business was transacted. Mrs. E. G. Peek was elected the new president, Mrs. E. G. Lindner, vice-president, Mrs. H. C. Dozier, treasurer, and Mrs. T. S. Wallis, secretary.

VOLUSIA COUNTY

The Volusia County Auxiliary met at the Morgan Hotel, in Daytona Beach on February the tenth. A large attendance and splendid meeting was reported.

Mrs. J. Ralston Wells, President of the State Auxiliary, went to St. Augustine on Wednesday, February the twenty-fifth in order to confer with Mrs. Spencer about the Constitution and By-Laws.

TUBERCULOSIS ABSTRACTS

A REVIEW FOR PHYSICIANS

ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

THE seventh conference of the International Union against Tuberculosis was held in August, 1930, in Oslo, Norway. Representatives from almost every nation attended the meeting. Three main topics were discussed: "BCG Vaccination," led by Professor Calmette of Paris, "Thoracoplasty," opened by Professor P. Bull of Oslo, and "The Teaching of Tuberculosis to Students and Doctors," reported by Professor His of Berlin. Excerpts of the discussions which follow are derived from the Quarterly Bulletin of the Union, Vol. VIII, No. 4.

PREVENTIVE VACCINATION AGAINST TUBERCULOSIS
BY MEANS OF BCG

Professor Calmette summarized the status of BCG. He defined immunity as a peculiar state of resistance to reinfections, depending on the presence of a few specific bacilli or a benign, non-progressive tuberculous lesion. Attempts to obtain immunity by killed bacilli have consistently failed. BCG is a strain of living tubercle bacilli, the characteristics of which are hereditarily fixed. When injected into the body, it produces tuberculins and exerts antigenic functions. It has lost all capacity to give rise to progressive tuberculous lesions.

Immunization can take place at any age, provided the individual is free of any bacillary contamination and reacts negatively to tuberculin. Allergic individuals derive no benefit from BCG. Newborn infants of tuberculous families should be inoculated promptly before they have come in touch with virulent bacilli. The culture may be given hypodermically or by mouth. To be successful, vaccination by mouth must occur within ten days following birth as during this time the intestinal mucosa consists only of protoplasmic cells and the living elements of BCG are then easily absorbed and scattered in the infant's lymphatic system.

Since 1924, BCG vaccination has been practiced in seven European, and four South American countries.

(Continued on page 440)

Any one can make belts, but belts which give compression without uplift may do serious injury

"STORM" The New "Type N" STORM Supporter



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COUNTY SOCIETY	SECRETARY	MEETINGS				Dues Paid.
		Date	Time	Place	Luncheon?	
Alachua	J. E. Maines, Jr., M.D., Gainesville.	2nd Tuesday	12:00 Noon	White House	Yes.	
Bay	Don S. Fraser, M.D., Panama City.					
Brevard	I. K. Hicks, M.D., Melbourne.	3rd Tuesday		Varies		
Broward	Anna Darrow, M.D., Ft. Lauderdale.	2nd Tuesday	8:00 P.M.	Chamber of Com- merce	No.	
Columbia.....	T. H. Bates, M.D., Lake City.	1st Monday.	7:30 P.M.	Blanche Hotel		
Dade	Jos. S. Stewart, Jr., M.D., Miami.	1st Friday	8:30 P.M.	Club Room, Huntington Bldg.	Occasionally.	
DeSoto-Hardee- Highlands ...	L. W. Martin, M.D., Sebring.		8:00 P.M.	Varies	Yes.	
Duval	Kenneth A. Morris, M.D., Jacksonville.	1st Tuesday	8:15 P.M.	Chamber of Com- merce Building	No.	
Escambia	J. M. Hoffman, M.D., Pensacola.	1st Tuesday	8:00 P.M.	Board of Health Building	No.	33%
Hamilton	J. R. Bruce, M.D., Jasper.					
Hillsboro	J. T. Cowart, M.D., Tampa.	1st and 3rd Tues- days	8:00 P.M.	Tampa Municipal Hospital	No.	
Jackson	C. H. Harrison, M.D., Cottondale.	2nd Tuesday	3:00 P.M.	Marianna	No.	
Lake	W. L. Ashton, M.D., Umatilla.	1st Thursday	12:30 P.M.	Eustis	Yes	31%
Lee	H. Quillian Jones, M.D., Ft. Myers.	3rd Friday	7:30 P.M.	Lee Memorial Hospital	No.	72%
Leon-Gadsden- Liberty- Wakulla- Jefferson	O. G. Kendrick, M.D., Tallahassee.	Quarterly	3:00 P.M.	Varies	Yes.	
Madison	Geo. O. Davis, M.D., Madison.					66%
Manatee	A. Q. English, M.D., Manatee.	1st and 3rd Tues. Oct. to May; 2nd Tues. May to Oct.	7:00 P.M.	Dixie Grande Hotel	Yes.	
Marion	Thos. H. Wallis, M.D., Ocala.	3rd Thursday	12:30 P.M.	Marion Hotel	Yes.	
Monroe	W. R. Warren, M.D., Key West.	1st Sunday	9:00 P.M.	Varies	Yes.	
Orange	J. R. Chappell, M.D., Orlando.	3rd Wednesday	8:30 P.M.	Varies	No.	68%
Palm Beach ...	Geo. M. Dawson, M.D., W. Palm Beach.	2nd Monday	8:00 P.M.	Court House	Yes.	
Pasco- Hernando- Citrus.....	Geo. R. Creekmore, M. D., Brooksville.	2nd Thursday	7:00 P.M.	Varies	Yes.	
Pinellas	O. O. Feaster, M.D., St. Petersburg.	Every other Friday	8:00 P.M.	500 Power & Light Bldg.	No.	
Polk	Herman Watson, M.D., Lakeland.	2nd Wednesday in Feb., Apr., June, Aug., Oct., Dec.	1:00 P.M.	Lakeland	Yes.	
Putnam	E. W. Warren, M.D., Palatka.	2nd Thursday	7:00 P.M.	James Hotel, Palatka	Yes.	
St. Johns	A. C. Walkup, M.D., St. Augustine.	3rd Tuesday	8:30 P.M.	Varies	Yes.	
St. Lucie-Okeech- bee-Indian River-Martin ..	C. L. Davis, M.D., Okeechobee.	3rd Thursday	8:00 P.M.	Varies	Yes.	
Sarasota	F. C. Metzger, M.D., Sarasota.	2nd Tuesday	8:30 P.M.	Varies	Occasionally.	
Seminole	J. T. Denton, M.D., Sanford.	2nd Friday	8:00 P.M.	City Hospital		
Sumter	W. E. Mitchell, M.D., Coleman.	2nd Tuesday		Varies	No.	
Suwannee	W. C. White, M.D., Live Oak.					
Taylor	R. J. Greene, M.D., Perry.	Last Thursday	12:15 P.M.	Eldorado Cafe	Yes.	
Volusia	J. Ralston Wells, M.D., Daytona Beach.	2nd Tuesday	7:30 P.M.	Varies	Yes.	41%
Walton- Okaloosa	A. G. Williams, M.D., Lakewood.	3rd Thursday	8:00 P.M.	Varies	Occasionally.	
Washington- Holmes	H. A. McClure, M.D., Chiplev.					

NOTE—Secretaries: Please submit information to complete the above schedule.

can, countries and has been given a trial in many other countries. Vaccination has no harmful influence; the general morbidity and mortality are less among vaccinated children than among unvaccinated, and the tuberculosis death rate among vaccinated children living in tuberculous families is almost nil. Vaccinated infants must, however, be protected for approximately one month after birth, either by isolating the children from the source of infection or by educating those who care for them. Calmette claims that the objections which have been raised against BCG could not be maintained and that the vaccine should be generally applied.

Several delegates reported the results of their experiments with BCG, which deviated but slightly from those of Calmette. Agreement was, however, not unanimous. Among those who disagreed with Calmette are the following:

E. A. Watson of Canada found in his experiments on animals that BCG has not been entirely deprived of virulence. He had also restored virulence to three strains of BCG as the result of inoculation in serial passages. Dr. Kethner of Germany did not admit the proof that BCG is a fixed virus. Professor Lowenstein of Austria thought that vaccination with living bacilli was a delusion. Professor Morelli of Italy attributed the good results obtained through BCG vaccination to the prophylactic measures which were carried out simultaneously.

THORACOPLASTY IN THE TREATMENT OF TUBERCULOSIS

Professor P. Bull described his personal operative technique and the results obtained by him and his colleagues, on which he bases these conclusions:

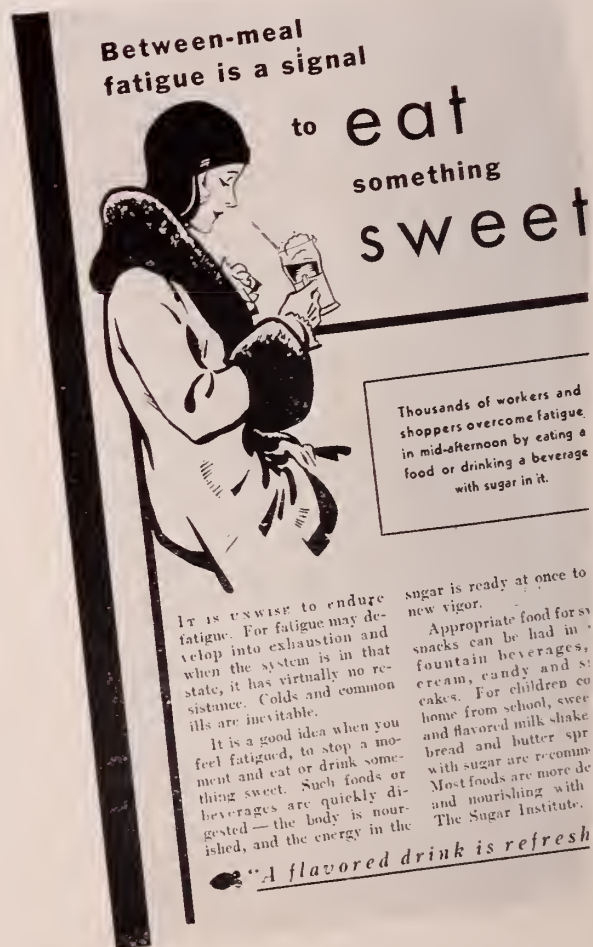
Patients with unilateral or practically unilateral pulmonary tuberculosis, in whom an artificial pneumothorax cannot be induced or does not yield the desired results, may be cured by a complete or partial extrapleural thoracoplasty alone or in combination with a pneumothorax or exsiccation of the phrenic nerve.

The operation must be undertaken only after consultation with the physician in charge of the case when he has, after a considerable observation period, been able to form a definite opinion on the prognosis of the case.

(Continued on page 442)

Here is one of the advertisements of The Sugar Institute

THE advertisement reproduced here is one of the series appearing in newspapers throughout the country. In order to keep the statements in accord with modern medical practice, they have been submitted to and approved by some of the leading authorities in the field of human nutrition in the United States. The Sugar Institute, 129 Front St., New York.



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fatigue is a signal
to eat
something
sweet**

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It is a good idea when you feel fatigued, to stop a moment and eat or drink something sweet. Such foods or beverages are quickly digested—the body is nourished, and the energy in the sugar is ready at once to new vigor.

Appropriate food for snacks can be had in fountain beverages, cream, candy and cakes. For children come home from school, sweet and flavored milk shake bread and butter spread with sugar are recommended. Most foods are more delicious and nourishing with The Sugar Institute.

"A flavored drink is refresh

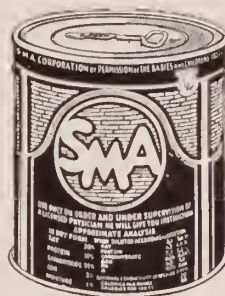
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An ideal place for moderately indisposed, convalescent and rest cure cases as well as for the aged and infirm. A limited number of obstetrical cases cared for. Some remain the year round for the benefit of the equable southern climate, quiet atmosphere, mineral water and diet.

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The other lung must show no clinical signs or, if they exist, they must be slight and stationary.

The extrapleural thoracoplasty is carried out through a paravertebral incision, with resection of the ribs, from the eleventh or tenth to the first inclusive.

The resection of the ribs must be undertaken as far back as possible, right up to the transverse processes of the vertebrae.

The two-stage operation gives a lower mortality than the one-stage operation.

The operation does not entail any appreciable permanent discomfort.

The choice between a local and a general anesthetic does not seem to affect the results appreciably.

A thoracoplasty is indicated when improvement has not followed three or four months' sanatorium treatment, and an artificial pneumothorax cannot be induced with success.

Recurrent hemoptyses constitute an additional indication for operation.

Cavities as large as, or larger than, a walnut heal more rapidly and surely after an operation than under expectant treatment.

If a cavity does not collapse completely after a thoracoplasty, it may be made to do so by a pneumolysis and the employment of a fat graft or a paraffin filling, plugging with tampons, or even drainage.

The chronic productive forms of pulmonary tuberculosis are those best suited for a thoracoplasty. It is most dangerous to touch the purely exudative forms.

From 35 to 45 per cent of the patients who cannot be saved by other means may be so by a thoracoplasty, becoming to all intents and purposes fully fit for work.

Some 20 per cent benefit from the operation, but ultimately die of tuberculosis.

Some 6 per cent become worse after the operation.

Some 10 per cent die from the operation; i.e., within eight weeks of it.

All sanatorium physicians and general practitioners should know the indications for, and the results of, extrapleural thoracoplasties. No one has any longer the right to withhold from patients suitable for this operation the chances it gives them.

(Continued on page 444)

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As to the need for diathermy in some phases of your individual practice, this must be left for you to determine. Our *abstract service* will possibly help you in a review of authentic literature on the subject. Your request for information incurs no obligation.

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Showing diathermy used for producing therapeutic fever in the treatment of dementia paralytica. Photo courtesy Northwestern University Medical School, Neurological Clinic, Chicago.

THE TEACHING OF TUBERCULOSIS TO STUDENTS
AND DOCTORS

Professor His had questioned all civilized countries relative to the teaching of tuberculosis. Replies to this inquiry constitute the basis of the report and justify the following conclusions:

The teaching of tuberculosis must be given within the compass of the clinical teaching of internal medicine, children's diseases, surgery and dermatology.

These clinics must consequently admit a certain number of tuberculous patients in all stages of the disease and maintain, if necessary, a connection with tuberculosis departments in other hospitals, sanatoria, and dispensaries. Students must be given an opportunity to visit sanatoria and dispensaries.

Special courses and opportunities for practical work on tuberculosis should be made available, but they need not be compulsory.

Post-graduate courses for doctors on the pathology, diagnosis, treatment and prophylaxis of tuberculosis must be organized in such a way that every practitioner may get an opportunity, at certain intervals, to bring his knowledge up-to-date.

Moreover, it is highly desirable that complete courses be organized on tuberculosis as a whole, or on certain specified problems.

A doctor who wishes to improve his knowledge of this subject ought to be given an opportunity to make a practical study visit to a sanatorium or a dispensary.

Medical officers need a thorough training and post-graduate knowledge in this field of medicine.

Attendance at national and international conferences ought to be encouraged by public authorities.

Dr. Willard B. Soper of the United States, one of those who took part in the discussion, remarked that "instruction in the different medical schools shows great differences, which can almost always be ascribed to the presence or absence of one or more individuals on the teaching staff who are vitally interested in this disease, men with whom the study of tuberculosis has become a passion and who find their greatest satisfaction not only in adding to their sum of knowledge but also in imparting it to others."

He described the post-graduate course given at the Trudeau School of Tuberculosis at Saranac Lake, which he regarded as a great influence in raising the standard of knowledge of tuberculosis in America.

(This review secured by the Florida Public Health Association from the National Tuberculosis Association).

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It is a matter of common knowledge that the chief obstacle to surmount in the management of an infant's diet is the trouble most babies have in digesting the casein portion of milk protein, so the fact that Mellin's Food overcomes this difficulty is a long step toward simplifying infant feeding, for other necessary adjustments are relatively easy.

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ADVERTISERS' NOTES

MICROPHOTOS OF BLOOD SMEARS IN COLOR

In a pamphlet on Liver Extract recently issued, Eli Lilly and Company have incorporated six plates of blood smears showing the blood in typical cases of pernicious anemia and the changes that are observable at intervals of seven, seventeen, thirty, and sixty days and after seven months under the administration of Liver Extract No. 343. These plates in four-color process show various phases of the blood from a typical pernicious anemia case to the normal. They are among the best microphotographs of blood that have been published. Physicians interested may obtain copies by addressing Eli Lilly and Company. The pictures would also be useful for instructing medical students.

Hoffman-LaRoche, Inc., well known as "makers of medicines of rare quality," have extended their property by the purchase of 10 additional acres of land, making a total tract of 35 acres. The purchase was deemed essential in the light of the Company's steadily increasing sales under keen aggressive management.

In the words of Mr. Elmer H. Bobst, General Manager, "Hoffmann-La Roche has just begun to grow!"

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**FIFTY-EIGHTH
ANNUAL MEETING
ORLANDO**

May 12 and 13, 1931

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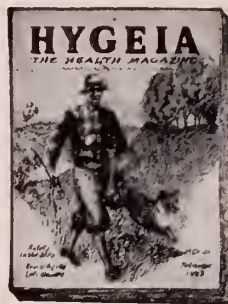
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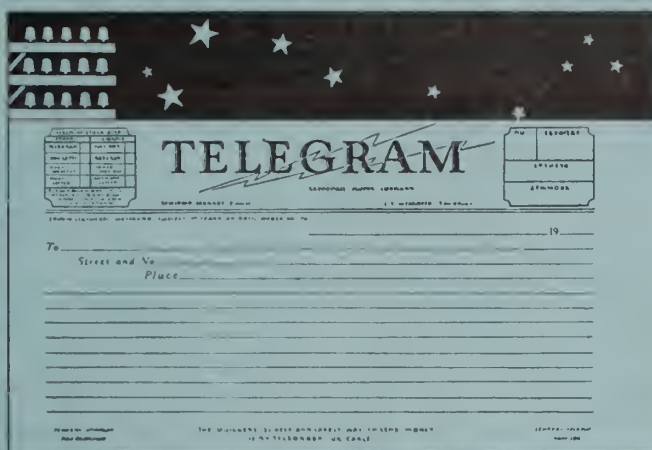


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FIFTY-EIGHTH
ANNUAL MEETING

of the

Florida Medical Association

at

ORLANDO



May 12 and 13, 1931

NEW YORK ACADEMY OF
MEDICINE
2 EAST 103RD ST
NEW YORK N. Y.

THE JOURNAL

OF THE

Florida Medical Association, Inc.

OWNED AND PUBLISHED BY THE FLORIDA MEDICAL ASSOCIATION, INC.

VOLUME XVII
NO. 10

Jacksonville, Florida, April, 1931

Yearly Subscription, \$3.00
Single Copy, 30c

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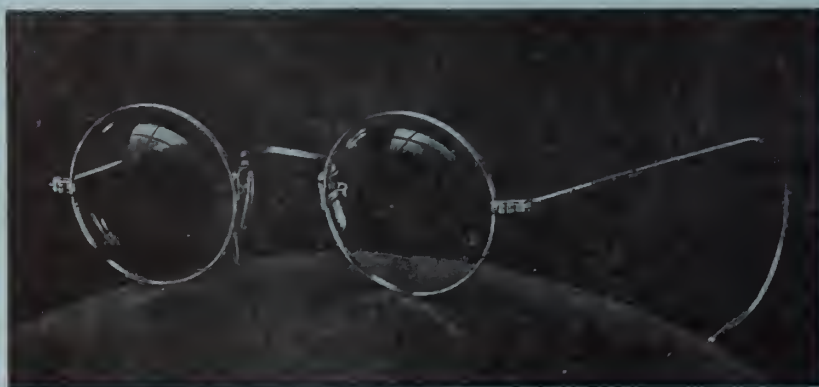
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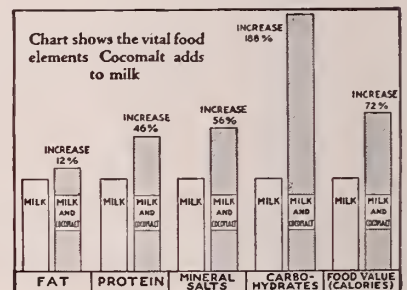
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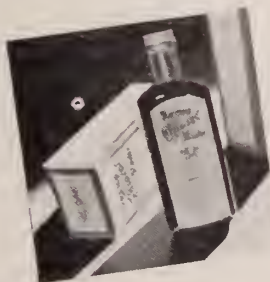
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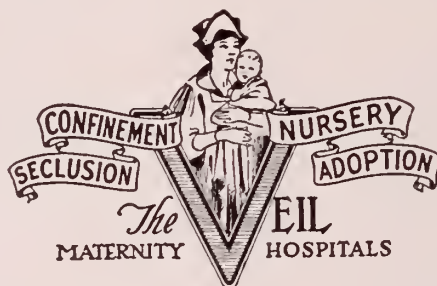
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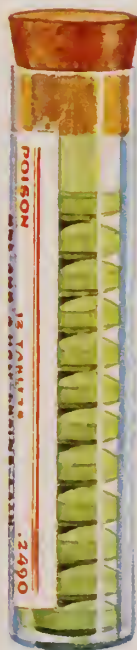
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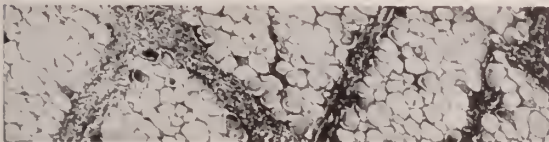
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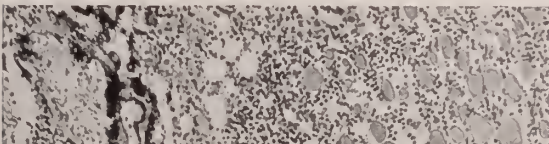
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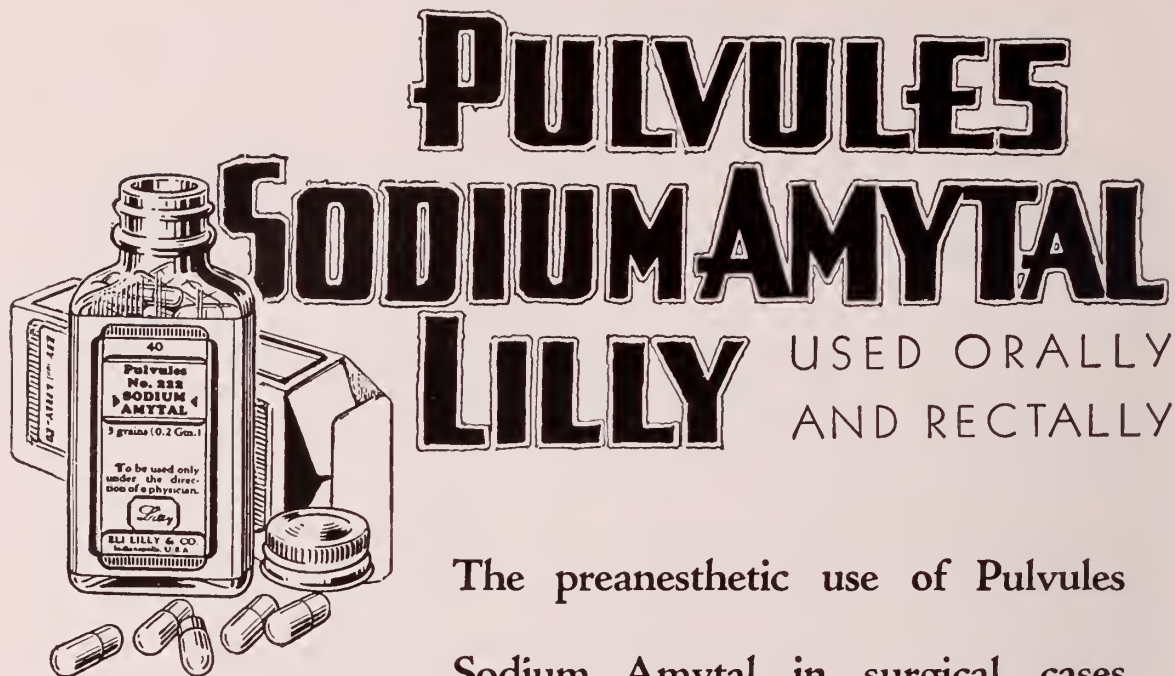
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THE JOURNAL OF THE FLORIDA MEDICAL ASSOCIATION

PUBLISHED MONTHLY

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Jacksonville, Florida, April, 1931

Number 10

ENTEROLITHS OF THE SMALL INTESTINE*

G. H. EDWARDS, M.D.,
Orlando.

Until I ran across a case of intestinal obstruction and at operation found that the condition was caused by an enterolith lodged in the small intestine near the ileocecal valve, I did not know that such a condition ever existed and I was dismayed at my ignorance or my failure to recall that I had ever read of the condition previously. However, on searching through the various textbooks and systems of surgery at my command, I was gratified to find almost no reference to this condition.

Dr. Richard Douglas in his work on "Surgical Diseases of the Abdomen" said: "Fecal impaction is not found in the small intestine, as this form of obstruction involves the colon only."

Keen states only that "Intestinal obstruction may be produced by 'abnormal intestinal contents'." Dean Lewis simply states that "A foreign body however, possibly a gall-stone, may be the indirect cause of blockage by becoming lodged at some point and acting as the center of an enterolith." A careful search by Williams¹ of all current medical literature, 1905 to 1912, inclusive, helped to bear out his supposition that obstruction of the bowel by fecal masses, while occurring with a not very great infrequency in the colon, was but rarely met with in the small intestine. Among the great number of case reports of mechanical ileus, from all possible causes, published within that period, no case of obstruction incited in this particular manner was found. His case of 1908 was the first one reported.

This rarity is, in fact, not hard to account for, bearing in mind the normal physiology of the intestine from end to end. An interesting feature in the large intestine is the marked absorption of water. In the small intestine, no doubt water is absorbed in large quantities, but its loss is evidently made good by osmosis or secretion of water into the intestine, since the contents at the ileocecal valve are quite as fluid as at the pylorus. In the

large intestine the absorption of water is not compensated by a secretion; the material becomes more and more solid as it approaches the rectum and is thus formed into feces.

CASE REPORT

Mrs. W., widow, 72 years of age; mother of four children. Deliveries normal and with history of never being sick, or as she stated, "knowing doctors by sight and not by consultation." While sitting at the table Wednesday evening at dinner, she said: "I feel sick," and arose from the table, but before she could turn around, vomited projectily across the table, the foodstuffs she had just taken. During the day previously, she had had a long ride, visited her son in another part of the city and felt as well as usual. Leaving the dining room, she went to her own room, vomited a little sour water, but retiring had a good night's rest and arose Thursday morning feeling somewhat tired and acknowledging some cramps in the abdomen. She had some breakfast and at mid-day a small lunch, but stated that the food started cramps which gave her a little nausea. Before the time for the evening meal, she rather unexpectedly vomited a small amount of a sour, bitter fluid and a few tomato seeds, a residue from the previous day's dinner. This gave her great relief and she ate a moderate evening meal, although complaining of some cramps and slight nausea. Her night's rest was not good; she awoke several times with cramps and once again vomited a little slime and very acid fluid. The first thing in the morning, Friday, she drank considerable water, but had no food until noon when she took an eggnog and during the afternoon considerable water. She had toast and milk for her evening meal, which she vomited two hours later. Cramps becoming a little more disturbing, she was aroused several times during the night and vomited once something which she said tasted like the meal she had had in the evening. She had no breakfast Saturday and in the middle of the forenoon vomited again, this time the water which she had just taken. An eggnog again at noon was relished, but in the middle of the afternoon and again in the evening she vomited rather foul milk curds

*Read before the Florida East Coast Medical Association, Melbourne, Oct. 2, 3, 1930.

and a large amount of yellowish, and, as she said, "smelly" material. Now a practical nurse with two years' training was called and, despite the fact her bowels had moved apparently normally for the past week, gave a colonic irrigation, which the patient said made her pass lots of gas and gave her some relief from distension. A tablespoonful of paregoric in the evening lessened the cramps and, although she vomited several times during the night, claims to have rested fairly well. Sunday she had water, tea, coffee, and milk at intervals, vomiting within an hour each time and emitting considerable more than she had ingested, the material being cloudy and foul. Her condition apparently began to worry the family and about nine o'clock Sunday night, I was called.

I found a very stout woman over two hundred pounds in weight. The abdomen was very flabby and there was a slight tenderness on the right side over McBurney's point; blood pressure 160 over 120; temperature, 101; pulse, 110. While examining her, she very kindly vomited a pint or more of yellowish material with a distinctly fecal odor. I made a diagnosis of intestinal obstruction, probably due to some condition, past or present, involving the appendix. Operation was refused, as a neighbor had had a condition "just like this a few days ago and one hypodermic stopped all the trouble."

The patient was given $\frac{1}{4}$ morphine and 1/100 atrophine. Everything by mouth was discontinued except sips of normal soda solution. Retention enemata of soda solution I pint containing glucose, digitalis and bromides were given every four hours. Early the next morning my pathologist made a blood examination. The report showed 3,500,000 red cells; hemoglobin, 78%; 9000 leucocytes with polynuclears, 70%, and mononuclears, 28%.

I saw the patient about nine o'clock Monday morning; there had been no vomiting since I was present the night before. She had had a good night's rest, her cramps had disappeared, she felt hungry and had retained all her enemata. A cleansing enema was given with small fecal results, but considerable gas was expelled. Tenderness over the right side was about the same as the evening before with temperature the same and pulse 120. I again proposed operation, but it was refused. I dropped in to see her about eight o'clock that evening and found that an hour after my departure in the morning she had vomited material with a fecal odor and had continued to

do the same about every two hours all day. The material she vomited for me was like that of the evening before, distinctly fecal in character. During the day, our nurse had given one hypodermic of morphine gr. $\frac{1}{4}$ and two high colonic irrigations and had assured the family that a few more irrigations and all would be well.

The patient announced that she was prepared to have an operation, and seconded by an older daughter, who had just arrived, the patient was at once sent to the Orange General Hospital. Under morphine and hyoscin narcosis supplemented by a few drops of chloroform, a right rectus incision was made and a rather small non-irritated looking appendix popped into view. The examining hand contacted at once with a mass in the small intestine, located about one inch from the ileocecal valve. The mass could be moved in the bowel about $\frac{1}{2}$ inch in either direction. It was too hard to be broken up and could not be passed through the ileocecal valve, so it was removed by enterotomy. The wound was closed by plain cat-gut No. 1 and over that a continuous lembert of fine silk. Further exploration of the abdomen failed to elicit any other abnormality; the gall-bladder was full but emptied easily, no stones were felt and there were no adhesions felt around the bladder. The abdominal wound was closed without drainage and the patient was returned to her room where she was given intravenous and subcutaneous injection of normal saline with adrenalin and digilin, despite which the patient's blood pressure continued to fall and she passed away four hours after operation. Toward the end, she stated that she was comfortable for the first time in five days.

This enterolith had physical characteristics of the same type as most of those which I found described in the few cases that I have been able to cull from the literature. It was not doughy and of a fecal nature as you would expect, but instead was hard, tuberculated and when dropped into the pus basin made it ring, as if a marble had fallen. Its greatest diameter one way was 1 and $\frac{5}{8}$ inches and 1 and $\frac{1}{8}$ inches the other; the greatest circumference was 3 and $\frac{3}{4}$ inches and in the other axis 3 and $\frac{1}{8}$ inches. It weighed 130 grains, that is, a little over $\frac{1}{4}$ ounce.

The concretion was bisected in order to note its characteristics and also to get a piece for examination. It was of a laminated crystalline structure with various pockets, and on fresh section these pockets were nearly filled with typical

doughy fecal material. An analysis made by Prof. Underhill of Yale University showed the cholesterol content to be 84.7% which is, as you know, very close to that of the biliary calculus. Additional tests revealed the presence of calcium, probably in the form of carbonates, as these were present and also iron and bile pigments.

Among the cases which I found reported, Rawlings² had two, in one of which the offending body was a true calculus, the other was a doughy fecal mass.

Phillips³ also reports two cases in one of which the mass was quite hard while the other stone was very friable and crushed easily when handled. It contained a small amount of cholesterol. One of these patients died.

In Berg's⁴ case there were a number of tuberculous strictures with a calculus above each stricture. These were hard and consisted chiefly of taurocolic acid.

Moerner⁵ reports three cases, the masses being chiefly composed of cholesterol.

Helstrom⁶ reports seven cases in detail. The obstructing masses were composed chiefly of taurocolic acid. Of these cases two died, a mortality of 29%. In two of these seven cases, tuberculous strictures with calculi above were present. These two recovered, as did Berg's case following intestinal resection.

In a location where this type of obstacle would be unexpected or at least unusual, because of the character of the media, one might expect to find that the nature of the obstructing mass would be the same in all instances, but this is not borne out by the reports made of the studies of the offending masses, in the cases I have culled from literature. In some instances, no chemical analysis was made, the mass being described only by its outstanding physical characteristics. Most of the calculi, however, were composed chiefly of either cholesterol or taurocolic acid indicating intimate relationship with the hepatic system.

The examination of the gall-bladder at time of operation precludes any possibility of this enterolith, as such, having been formed in the gall-bladder, although it is possible that the nucleus might have started there, despite the fact that we have no history of biliary colic. The only thing of moment noted about her diet was that she was very fond of fats and we know cholesterol is produced by a fat decomposition. Even so, I had always imagined that the transit of all food-stuffs through the small intestine was so rapid

that there would not be time enough to permit of fat decomposition and cholesterol crystallization in the amount as represented by a stone of this size; yet here it is and found in the small bowel. Its type of structure shows that it must have taken a considerable period to form and there was no marked stricture of the small intestine at the location of the stone. This but illustrates what an unusual thing may occur, when everything is apparently functioning normally, thus seemingly contravening our theories or knowledge of simple intestinal activity.

In the 18 cases which I have been able to collect from the literature, my own included, 6 died, 7 survived the operation and in 5 instances no statements are made as to the outcome of the operation. From those which we know either lived or died our mortality is 48%, while including the five in which no statement is made, considering that they survived, the mortality is still high, being 33%. It seemed to me that the mortality is much higher than it should be, I suppose the reason being that in nearly all these cases reported a considerable period of time elapsed between the onset of the condition and the hour of operation. In my case more than five full days intervened and death evidently was caused by a rapid toxemia which was incident upon the quick absorption permitted by the relief of pressure upon the intestinal absorbents due to the removal of the obstructing mass.

I doubt, even if the cases were more numerous, that we would ever be able to make a positive diagnosis of this type of obstruction. There are no characteristic features that I know of that would assist in making a differential diagnosis. The symptoms are those of intestinal obstruction and its production by an enterolith adds but one more possibility, as to the cause, to the many other possibilities which we always have in mind when we meet with a case of persistent or fecal vomiting. In the cases noted in literature, pain was usually present at some point in the lower portion of the abdomen, more frequently on the right side and the impaction was noted at various places from the middle of the jejunum downward to the ileocecal valve.

The prognosis as to recovery is the same as that with any other type of intestinal obstruction with fecal vomiting present, that is, favorable with early operation; unfavorable if we procrastinate. If early operation is undertaken, our mortality will be low; if we wait for several days until the

resistance of the individual is lowered, the mortality will be high, even in the face of jejunostomy.

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THE VALUE OF ACTINOTHERAPY AND HELIOTHERAPY*

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Sunlight as a remedial agent has been known and used from time immemorial. The literature and works of all ancient peoples show that they were aware of the health-giving qualities of the sun's rays. They regarded the sun as the source of all energy and life. It was but a step from this recognition of the orb of light as the source of all energy, to its worship. Without question the intensity of the sunlight and moonlight at the different latitudes and altitudes has had a marked influence on the mental and physical make-up of the peoples of earth.

Hippocrates recognized this, and in all of his therapeutic counsels did not forget the life-giving qualities of the sun's rays.

In recent times Faure, 1777, is credited with the use of sunlight in the treatment of ulcers. Hufeland early in the nineteenth century is said to have used sunlight in the treatment of rachitis. In 1840 Rollier and Pancet published, "Treatment of Tuberculosis Arthritis by Sunlight." Bonnet counseled the exposure of the entire torso, not only the part affected, to the sunlight. Rickli published a paper on "Atmosphere Cure" in 1855. All these workers seem to have recognized the leading types of cases that are known today to be most responsive to heliotherapy.

The most advanced step in phototherapy was made by Finsen. By a series of experiments he

elucidated clearly that all the rays of the sun are not of equal value in the treatment of diseases, especially was this made evident in the treatment of lupus vulgaris. He predicted that smallpox would not scar if the patients were kept from the sunlight—especially the chemical rays. This fact finds itself voiced in the ancient practice during the Middle Ages, in the wearing of red flannel over the face and head and hands by smallpox patients, and in the windows being draped with red curtains.

Finsen's epoch-making paper, "The Treatment of Lupus Vulgaris," was published in 1897. A proper evaluation of this remarkable man's work is not possible in this paper. It can be truly said that his ideas initiated the modern phase of light therapy. He devised the first apparatus for the treatment of the sick by the use of artificial light. He received the Nobel peace prize in 1903.

Bernard, in 1902, and Rollier, 1903, began the treatment of tuberculosis by sunlight exposure. Huldchinsky (1918) is given the credit of first using artificial light in the treatment of rickets. Hess demonstrated by radiogram control the beneficial effects in rickets of actinotherapy, also the modification of calcium and phosphorus content in the blood of patients so treated. He also showed that results could be obtained by the use of radiated foods.

In 1666 Newton demonstrated that white light is composite; he also showed that light once dispersed into its primary colors is monochromatic. Herschee, in 1880, discovered the zone of infra-red by noticing that a thermometer placed beyond the red band registered higher. Ritter is credited with the discovering of the ultra-violet zone in 1801. The mercury lamp was patented in 1852 by Jackson; but the mercury-quartz lamp was not available till after 1904 when Heraens fused the quartz crystals. The carbon arc used in therapeutics began with Finsen. The light of the sun can be used by all. It is everywhere. But it is not always available and not always constant. The patient cannot always be placed in the sunshine and if any protecting screen as glass or other barrier intervene, the needed rays are filtered out. Notwithstanding these various difficulties, the sunshine at high altitudes, mountain tops, deserts, and the seashore, is being used to treat the sick. God's great outdoors is the world's best therapeutic sunshine sanitarium. But if it be unavailable, then scientific research and invention have placed at our direction various types of

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lamps for the generation of the therapeutic waves, actinotherapy. One thing is essential, be certain that the apparatus is delivering the therapy waves indicated and in sufficient quantity.

In the therapeutic use of the various zones of wave energy, care must be exercised in the choosing of patients as to whether they are good subjects for such exposure. People who are blond or with but little pigment in the skin should be treated differently from those who are dark. If there is a history of idiosyncrasy to the sun's rays, great caution should be exercised in radiating such a person to the ultra-violet zone. There are certain types of people who are so sensitive to the sun's rays or to any of its artificial counterparts that they may receive permanent, if not fatal, reactions on their skin and internal viscera. The degree of pigmentation does not properly reflect the value of the therapy to the individual.

In all ultra-violet radiating processes, the eyes of the patient as well as of the operator should be well protected. Radiation, if at all practical, should include the whole body as well as the lesion. The time element should be built up as rapidly as possible. Greatest reliance and confidence should be placed in those types of apparatus the production of which nearest approaches the sunlight.

Phototherapy is indicated in those chronic diseases, where, directly or indirectly, the effects are constitutional and the toxemia produces a faulty metabolism with wasting and atrophy. Tuberculosis may be considered first among such disorders, then rickets, rheumatoid arthritis, together with the various types of rheumatic diatheses, the cachexia of malignancy, pernicious anemia, the secondary anemias, the various types of malnutrition, especially as seen in the child and adolescent youth; the nausea of pregnancy, (not complicated by mechanical impediments), lactating mothers, especially those deficient in quantity or quality of nourishment for their infants, all fracture and surgical cases when nutrition is poor and convalescence is unsatisfactory. In many of these wasting diseases it increases the metabolism 44%. The calcium metabolism is markedly increased; muscle tone is maintained and increased and the patient gains in weight.

Sunlight in the treatment of tuberculosis is most effective in the undernourished child with a positive tuberculosis reaction and a history of home contact. This unusual response is no doubt due to the increased calcium metabolism. The effects in the more pronounced cases with cervical

adenitis and caseous tracheo-bronchial lymph nodes are just as gratifying.

If you are interested in public health, urge the establishment of the open air school. One hour a day in the open air and sunshine with practically nude bodies will mean better health, better lessons, and better children.

That the ultra-violet ray and infra-red ray have antiseptic and bactericidal power is generally conceded. Hence, it is to be expected that in empyema and pulmonary abscess cases, these modalities will cause a reduction in the secretions and a lessening of the foul odor. When the sunlight is not available the artificial therapy should be used. The general condition of the patient improves. He feels better and his morale goes up. The technique worked out by Rollier should be followed until the operator has had sufficient experience and developed judgment to guide him in the individualizing of a technique of his own. All untoward reactions should be carefully noted and the technique modified or discontinued at once. Lassitude or marked rise in temperature after treatment are indicative of too marked metabolic change and call for modification in the therapy. Every patient has his own tolerance and this must be observed, yet he should have as much exposure as possible in as short a time as is consistent with his comfort. Certain patients cannot tolerate the ultra-violet ray.

Rosselet found the ultra-violet rays six times stronger in winter and two times stronger in summer in the mountains than in the lowlands. Next to the mountains the seacoast is the best place for the sun cure. Snow, ice, water, and sand enhance the power of the ultra-violet rays by reflection. On cloudy days, some effect of these rays can be obtained by air baths, which means that in summer time when it is warm enough so that the patient can be exposed in comfort without the direct heat of the sun, air baths should be substituted for sunbaths on cloudy days.

The therapeutic effect of the ultra-violet lamp is greatly enhanced by raising the skin temperature from 105 degrees up to 115 degrees, Fahrenheit, by use of the red or infra-red ray before the ultra-violet ray is exhibited. Kisch maintains that it is the best ray of the solar spectrum; that it is of more marked therapeutic value than the ultra-violet. This position is probably open to question; but it goes to emphasize the importance of the artificial therapy, to simulate sunlight as closely as possible.

In the various skin lesions as eczema, psoriasis, lupus vulgaris, acne, ringworm, urticaria, impetigo, barbers' itch, etc., and the various types of surgical tuberculosis when the lesions cease to respond well to the infra-red and ultra-violet ray, X-ray therapy in properly graduated doses will have most marked beneficial effect.

Sunlight has a powerfully stimulating and tonic effect on the mind. It exhilarates and enlivens; it induces a sense of gaiety, liveliness and wellbeing; it dissipates gloom and depression. Not only is the vivacity increased but the mental capacity may be raised or rather, potential intelligence, latent but existing, may be liberated. The toxic or mentally depressed patient is helped to a more normal outlook, and tired and over-wrought nervous people are soothed and quieted.

There is a seasonal response to sunlight. It is most effective after the darkness of winter. In the spring and early summer it is most pronounced and at that time is best sought inland. In late summer, sun at the seaside with other associated stimuli is more effective.

Prolonged exposure to sunlight does not produce the same beneficial effects either generally on the body or on the mentality as alterations in treatment, that is, alternating exposure to light and shade and intensity. Sun treatment in temperate regions is more valuable than similar treatment in the tropics except in the treatment of superficial lesions.

Exposure to ultra-violet light is associated with alteration in hemobactericidal power even though ultra-violet rays are absorbed before they reach the blood stream. Visible light is transmitted through the skin and largely absorbed in the blood where its energy is converted into heat. Sonne is of the opinion that this thermal effect is of value in the destruction of circulating toxins. There is an increase in the calcium, phosphorus and iron interchange in the blood, convalescence is assisted and the cure of many conditions hastened. During exposure the basal metabolism is raised and remains high for a considerable time after insolation has ceased. This implies greater tissue change, necessitating the supply of more food, increased digestion, absorption and oxygenation. It necessitates greater excretion of water products. It speeds up tissue change in both healthy and diseased structures. Under exposure to light, respiration is decreased in rate but increased in depth. The respiration, excretory and protective powers of the skin are increased by exposure

to light. During an epidemic of chickenpox at Rollier's Clinic, cutaneous vesicles were not found on tanned skin; acne very seldom develops in tanned skin. The actinic rays are of great value in the treatment of tuberculosis of the pelvic region, as shown by Schwartz. Bartholin gland infections, cervical erosions, cervicitis, vaginitis, leukorrhea, and amenorrhea readily respond to this therapy. Schapiro tells of two cases of tuberculosis peritonitis which were cured by ultra-violet radiation and no treatment is better for the various types of neurasthenia than the soothing and gently stimulating sunshine of God's great outdoors.

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INCISED WOUND OF CORNEA*

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Patient.—Mr. J. C. C., Clermont, Florida, sustained an injury to the right eye on the afternoon of March 18th. On the morning of March 19th, I had occasion to examine the eye and found that the cornea had been incised completely through, transversely across, from its external to internal margins about on a level with the center of the pupil. The lens capsule had been punctured with a resultant traumatic cataract. The anterior chamber was obliterated, with the posterior sur-

*Case presented before the Orange County Medical Society, May 15, 1930.

face of the cornea resting on the iris and lens. The iris was uninjured except for a small tear on the lower nasal pupillary margin. All this injury had been produced by the point of one blade of pruning shears accidentally thrust into the eye.

After examining this mutilated eye, the first impulse was to enucleate it. Then it was decided that, although the vision was lost, it would not endanger the life of the patient or the other eye to try and retain the eye in place and avoid enucleation. There was nothing to lose. With this decision reached, the corneal margins were freed from the mass of fibrin which had collected there overnight and the corneal wound closed with four sutures. The very smallest corneal silk suture material was used. The sutures were carried down to but not through Descemet's membrane. After the cornea was sutured, a conjunctival flap was taken from the upper part of the eye with the base of the flap opposite the outer end of the wound. The flap was pulled across the cornea completely covering the wound and anchored at the corneo-scleral margin. Atropine-bichloride ointment was placed inside the lid and the eye closed with a very light dressing. 10 cc. milk injections were made daily from the 19th through the 24th. There was never the slightest infection. On the 8th day the flap and corneal sutures were removed. The wound had healed sufficiently to prevent the escape of fluids from the anterior chamber. The anterior chamber was well filled and the cornea had its normal curvature. At this time there was noted a slight panus or vascularized tissue along the corneal scar. This was to be expected and, in fact, what we tried for with the conjunctival flap since this assured rapid and firm union of the wound. There were adhesions between the posterior surface of the cornea and the iris and the pupillary margins of the iris and the lens. This could not have been prevented since the iris had to be in apposition to these tissues for many hours before the anterior chamber was reformed. There is at present an increase in the intra-ocular pressure of 10 mm. hg. but this is due to the swollen lens which has been punctured.

ARTHRITIS, WITH SPECIAL REFERENCE TO CAUSE*

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There are several kinds of arthritis due to as many causes, and each kind might be discussed as a separate disease entity and require a volume to give a full discussion. Time will not permit even a short discussion of each kind, so we will confine our discussion at this time to the causes of that class of arthritis which, in its advanced stages, is usually described in medical literature as arthritis deformans. Not being satisfied at seeing so many people with distorted bodies and suffering the tortures of the damned because of the failure of our profession to give relief, while these sufferers are becoming the victims of the charlatan, we determined some years ago to find the cause of this disease. It was a long, hard road for one who is neither an expert in chemistry nor bacteriology nor pathology, and had not the necessary equipment of laboratory nor material to do successful work. Months ran into years, and the theories of so-called experts added to the confusion of the subject with little added knowledge, till we began the study of the proteins and their constituent units of amino acids and their resulting amines. In our crude laboratory we began to make some experiments in conjunction with the little we could find in literature, and we believe our findings are worthwhile.

Two parallel lines of thought have been studied and presented by scientists which, for convenience, we will refer to as the studies and discoveries of Barger on the one side and Pemberton on the other side. These were two great scientists searching for truth; and they were separated, as it were, by only a narrow distance, as two Nimrods looking for big game on opposite sides of a narrow jungle. The big game was in the jungle and in close range of either of them; but neither one ventured into the jungle; and, while their accomplishments were enough to make each of them great before his profession, yet neither one saw that which could have made him greatest before the world. Barger and his co-workers in chemistry showed how certain amines are formed in decomposition of meat and how these amines had certain pressor action in physiology. They proved that the amines approaching nearest to

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adrenaline in chemical structure have the greatest pressor action on the tissues. They showed, too, how some amines exhibit greater pressor action on certain organs while they have little or no action on other organs, also how some amines actually reduce the blood pressure. They showed, furthermore, how this pressor action is produced through the sympathetic nerves, for which reason they called it sympathomimetic action. All of these experiments seemed to have been made from spoiled fresh meats and tested on lower animals without any mention of their relation to medical science. Now, Pemberton and his associates worked out the other side of the situation. They, through their studies in pathology and bacteriology, proved that the morphological conditions about the joints in arthritis deformans are due to some pressor substance, whatever it is, having a special affinity for joint tissues; and that this pressor substance narrows the arterioles and capillaries about the joints so that there is not sufficient blood circulating about the joints to keep up the proper tissue growth and repair, resulting in the several morphological conditions of arthritis deformans. They showed, too, that bacteria are not demonstrable in many cases and that the pressor substance must be floating in the blood and that it must be carried from some distant focus of infection. Their work is well in advance of the various theories promulgated by various authors as to the cause of arthritis; and they established facts to support their theories. While each of these scientists was making progress on his side of the jungle, Barger sticking close to chemistry for scientific advancement and Pemberton holding fast to his work in pathology, neither of them seemed to realize how near he was to the other. Barger's thought seemed to be directed to chemistry without any connection with the healing art. Pemberton's thought was pathology and the healing art without the proper thought of chemistry. What we now need is the jungle cleared between these two scientists, and we will have made immeasurable strides toward the cause of not only arthritis deformans but also many other morbid conditions, which will eliminate much theory and substitute real knowledge for these useless theories. Dr. Allan Eustis began to break through the jungle when he discovered the relation of histamine to the cause of some cases of asthma (See So. Med. Journal for April, 1930). Weiss and Ellis are edging into the jungle in their article in The Journal A. M. A. for Sept.

20th, 1930. Now, it is the purpose of our investigations to penetrate the narrow but dense jungle between Barger and Pemberton and show how the amines, worked out by Barger and his associates in chemistry, not only may cause but really do cause the pressure action on the arterioles about the joints as demonstrated by Pemberton and his associates.

Amines: Our dictionaries would define amines as chemic compounds formed from ammonia by replacing hydrogen with an alcohol radical. This definition is all right for the general chemist; but the amines which interest us are certain amines of biology formed from amino acids by the decarboxylation of these amino acids, converting the amino acid into the corresponding amine by elimination of carbon dioxide. It is a process common in vegetable and animal decomposition of the amino acids of the proteins by bacterial action just as the carbohydrates are decomposed into alcohol by eliminating carbon dioxide. The difference is probably due to the difference of organisms as well as the difference of substance decomposed; the amines resulting from the amino acids of the proteins, while the alcohol results from the carbohydrates after the elimination of carbon dioxide. Whether true decomposition (decarboxylation of amino acids into amines) can occur in the living tissues and fluids of the body, we are not able to say from our personal knowledge. One author states positively that this reaction cannot take place except in dead tissue, which seems correct from our experience. The amines produced are the corresponding amines of the amino acids decomposed and are not varied by the strain of bacteria producing them. This is the parting of the way where so many good students of this subject have gone astray. They tried to determine the kinds and varieties of toxins by the different strains of bacteria. Let us repeat that the amino acid and not the strain of bacteria determines the resulting amine. Barger, in his investigations, used fresh meat which he caused to spoil by exposure in the open atmosphere, and from this he extracted the amines. His investigations showed that tyramine has the greatest pressor action since it is the amine approaching nearest to the chemical structure of adrenalin. The difference between the structure of tyramine and adrenaline is that adrenaline has a hydroxyl attached to the meta position and a hydroxyl attached to the alcohol and has methyl attached to the nitrogen, which would give adre-

naline the greater pressor action. Barger found that additional hydroxyls in para or meta positions or attached to the alcohol increase the pressor action, but in the ortho position no change is made. He found, also, that certain increase in the length of the side-chain increases the pressor action of amines, but this length is limited. He found, too, that some amines direct their pressor action to certain organs without any general pressor action. That histamine increases the pressure of the uterus and bronchial tubes but tends to lower the general blood pressure. That indol and skatol, amines from tryptophan, tend to lower the general blood pressure while they produce nausea, vertigo and vomiting. He examined about forty amines and showed that, theoretically, there might be formed amines which would have greater pressor action than adrenaline, but these had never been synthesized, which leaves adrenaline still the drug of greatest pressor action of any yet examined.

In our private experiments, some things have been accomplished which have convinced us that many cases of arthritis deformans are due to the pressor action of amines produced by the action of bacteria of focal infections. We have made cultures from specimens of apical granulomata of extracted teeth, from cheesy matter extracted from the crypts of tonsils and from fecal matter, all from persons suffering from arthritis, and find that all of these give about the same results in cultures of various foods from the table. Bacterial examinations of these cultures show both staphylococci and streptococci, and the toxins in the fluids seem to be amines in all cases. Our tests have of necessity been very limited, but we are still working at every moment of our leisure and hope to be able to give some better personal proofs of our statements at some later date. In each of our tests, we prepare controls which remain sterile, to satisfy ourselves that we are avoiding atmospheric contamination in handling our specimens. Certainly, we have not been able to separate the several amines from the cultures, and question our ability ever to accomplish this with our limited means of procedure; but, by starting the thought in the minds of others, we hope that some real chemists and bacteriologists will push the work to a definite end. So far as we have been able to determine, meats (roast beef and pork) are productive of the greater pressor amines. Milk and potatoes seem less potent.

Bacteriology: The subject of focal infections in

the etiology of arthritis has become so well established that it ceases to be theory and is listed with the established facts. The unsettled questions now are the manner in which the toxins of these focal infections reach the joints and the strains of bacteria which produce the toxins and what the toxins really are. Various bacteriologists have made it clear that, in most cases of focal infection causing arthritis, the bacteria belong to the streptococcus-pneumococcus strains; and the evidence is sufficiently clear to consider this established, although there may be other bacteria involved in some cases. We believe that we have made it clear in the evidence given above that these toxins are amines and that these amines pass from the points of infection by absorption into the blood and through the blood they reach both the sympathetic centers and the affected joints, or whatever tissues they may direct their action toward. It is hard for pathologists and bacteriologists to get away from the idea that the bacteria actually enter the joints and there produce the symptoms of arthritis. We do not deny that this may be true in some cases; but we do deny that bacteria can be demonstrated in all of the arthritic joints in all cases of arthritis. Again we do not see how the bacteria, setting up a local inflammation adjacent to their activities would produce the morbid conditions seen in many cases of arthritis deformans. We believe that we make it clear beyond reasonable doubt that, from the facts presented by those who have gone before us and from our own experience, both laboratory and clinical, that all of the symptoms and conditions of arthritis deformans can be and are produced by the amines produced by bacteria in the foci of infection, that these amines enter the blood by absorption and that they produce the morbid conditions and symptoms by their action through the sympathetic nervous system.

Foci of Infection: Perhaps the tonsils and teeth are the more common primary foci of infection; but the sinuses and nasal passages are common points. The lungs and the genito-urinary organs, in fact, any tissues of the body may be primary foci. The intestinal tract may be either primary or secondary. Many cases of arthritis are readily relieved by extraction of a tooth or removal of an infected tonsil, in the early stage of the disease; but, if the sloughing is permitted to go on long, the bacteria are swallowed and pass on into the meanderings of the intestinal tract, finding lodgement in stomach ulcers, intestinal ulcers, in

the gall-bladder or the appendix, and last, but not least, in the pockets of the colon. It is here that we get many of the cases of chronic arthritis following an acute attack which was relieved by the extraction of a tooth or the clearing up of some other local infection about the mouth, the throat or the nasal passages. The bacteria are swallowed down to make their way to the colon, where they find lodgement. Constipation is one of the essentials, and a diseased colon, or a prolapsed colon adds to the possibilities of lodgement. Particles of food pass through the upper alimentary tract undigested. The nesting bacteria are ever ready to attack these particles of food, and they decarboxylize the amino acids of this food, producing amines which are readily absorbed since they are crystalloids and most of them are soluble in the fluids of the alimentary tract. Once the colon is infected, the undigested food coming along into it each day, is converted into amines continuously, and, these amines being absorbed, the pressor action in the body becomes constant and chronic. Some of these amines have special pressor action for the sphincters of the body, causing the pylorus and the ileocecal valves to contract and interfere with the passage of the food, thereby interfering with the normal digestion and absorption. Some cases may be made worse by strictures in the colon which act in like manner. These are the cases which, if treated early, may save the patient from a life of pain and deformity. We must remember that there are variations in the diet and also variations in the digestive systems of different people which make variations in the kinds of amines produced in the infected colon. If tyramine is in excess, there may be general hypertension. If histamine is in excess, there may result dysmenorrhea, amenorrhea or asthma. If indol and skatol are in excess, the general blood pressure may be lowered. Other amines (which we have

not been able to determine up to this time) cause arthritis, angina pectoris, mitral stenosis, and perhaps a dozen other diseases. The field is too great for one working under difficulties to survey.

Action of Bacteria in Producing Amines: As indicated above, the bacteria decompose only dead tissue into amines. It is the dead tooth, or the tooth with diseased and dead tissue about it, which the bacteria attack, and here they convert the amino acids of this dead tissue into amines by separating the carbon dioxide. In like manner, they attack the dead cheesy matter in the crypts of the tonsils and convert this into amines. When we develop a cold, the serum exudes from the diseased mucous membrane of the nose and throat. This exuded serum and the fibrin with it are dead tissue after they are thrown out of the body. Here the bacteria find lodgement and convert the amino acids of this serum and fibrin into amines which produce the toxic symptoms, and, if the sinuses become infected, arthritis may result. We have shown above how the amines are formed in the colon. One point which we will mention is that amines are crystalloids, that they are alkaline bases and that they are readily absorbed in most cases. Let us repeat that amines produce their morbid conditions by their astringency, or pressor action, that they affect different organs differently just as different drugs like ergot, digitalis and catechu direct their pressor action toward different organs.

There are many other things which we would say here, but time and your patience will not permit. Let it suffice for the present to say that treatment of arthritis should be directed to meet the morbid conditions after the foci of infection have been eliminated. Some day we hope to go deeper into this subject with you and present a line of treatment more in accord with the causes of this and its kindred diseases.

Fifty-Eighth Annual Meeting
FLORIDA MEDICAL ASSOCIATION
Orlando—May 12-13, 1931



AEROPLANE VIEW OF BUSINESS SECTION

Orlando, the Convention City

Cities are like people. One likes them not so much for their similarity as for the characteristics in which they differ, that give them a distinct personality.

Just to say that Orlando is the largest city of Central Florida, with a resident population of 30,000, that it has 200 miles of paved streets, a square mile of business district, is telling only a small part of the story of one of the most important convention cities of the state.

It is because these 200 miles of paved streets curve around the shores of 31 fresh water lakes, and because they are lined with 10,000 oak trees, and because the lakes with a total area of two hundred and thirty-nine acres are a part of the park system, focusing point for the landscaping, that Orlando's streets have a fine distinction. Nowhere within the city area of twelve square

miles is one more than ten minutes walk from one of these beauty spots, forever open to all the people.

Orlando received its name in 1860 from John Worthington, postmaster, merchant and student of the classics. It is a far cry from those days, when the nearest trading point of any consequence was Savannah, and the few settlers took turns in making the trip for the needed supplies to the present day, when Orlando has a trading radius of fifty miles, that includes 175,000 persons, a score of wholesale houses making the city the distributing point for Central Florida, and more than one hundred industrial plants.

It is indeed a far cry but there are still a few of the active residents of the city who well remember those days and like to tell of them in their marked contrast with the luxurious present.

They, who have seen roads grow out of the trails, railroads come bringing prosperity with better transportation, networks of highways traversing the state, and airships rising from the municipal airport, perhaps more than newcomers realize the meaning of the word progress.

Orlando is in the geographical center of the state, and the hub of the good roads system of the state, with six main highways leading to the arteries of traffic throughout the commonwealth, and bringing any city in Florida within a few hours motor run.

Orlando has a municipal auditorium, with a seating capacity of 3,500 and in it one of the finest pipe organs in the south, which serves as a convention hall for large assemblies, and for the flower shows, musical entertainments, and serves as an exhibition building during the week of the Central Florida Exposition each year.

The Orlando Chamber of Commerce owns and occupies a four-story building, which serves not only the needs of the organization, but also serves as headquarters for most of the civic clubs and all the tourist clubs in Orlando.

Known for a score of years as the most musical city south of Atlanta, Orlando gives strong emphasis to music in the entertainment program for visitors, and this with the superior research department of the Albertson Public Library, and the work of the Orlando Art Association in addition to the many activities of the Chamber of Commerce helps to attract to the city many thousands of visitors from all parts of the country each year.

Orlando has 1,900 hotel rooms, several restaurants of the highest class and tea rooms of excellence, all doing their important part in making guests glad they came to the City Beautiful, and our shops would do credit to a much larger city.

The Florida Motor Lines have their headquarters in Orlando, from which they serve or connect with motor coach service the entire state and many northern points.

There are approximately eight thousand homes in Orlando, most of them owned by the people who live in them, and almost none of them without some beautification.

Orlando entertains approximately 10,000 delegates to conventions each year and during the six



ORANGE GENERAL HOSPITAL



San Juan Hotel, Convention Headquarters

winter months many thousands of visitors share the entertainment provided for them by the City of Orlando and the Orlando Chamber of Commerce. They, as well as the residents, think first of Orlando by its synonym, "The City Beautiful," which never loses its fitness, whether one sees the city but once in passing through, or knows it intimately and knows a little of the facts and figures which make it one of the most talked of small cities in America.

At the time this Journal went to press, the following Societies had reported 100% of 1931 membership dues paid: Broward, Lake, Manatee, Monroe, Orange, St. Johns, Sarasota, Seminole, Sunter, and Walton-Okaloosa.

PAST PRESIDENTS**

FLORIDA MEDICAL ASSOCIATION, INC.

- 1885—Dr. Joseph Y. Porter, Key West.*
- 1889—Dr. R. P. Gary, Ocala.*
- 1890—Dr. J. Harris Pierpont, Pensacola.
- 1891—Dr. Sheldon Stringer, Brooksville.*
- 1892—Dr. R. A. Lancaster, Gainesville.*
- 1893—Dr. J. D. Rush, Apalachicola.*
- 1894—Dr. R. P. Daniel, Jacksonville.*
- 1895—Dr. C. B. Sweeting, Key West.*
- 1896—Dr. H. K. DuBois, Port Orange.*
- 1897—Dr. R. B. Burroughs, Jacksonville.*
- 1898—Dr. R. P. Izlar, Ocala.*
- 1899—Dr. J. Harrison Hodges, Gainesville.
- 1900—Dr. W. H. Hughlett, Cocoa.*
- 1901—Dr. J. Harris Pierpont, Pensacola.
- 1902—Dr. J. Harris Pierpont, Pensacola.
- 1903—Dr. DeWitt Webb, St. Augustine.*
- 1904—Dr. E. N. Liell, Jacksonville.*
- 1905—Dr. J. M. Jackson, Miami.*
- 1906—Dr. John MacDiarmid, DeLand.*
- 1907—Dr. W. P. Lawrence, Tampa.*
- 1908—Dr. J. F. McKinstry, Gainesville.*
- 1909—Dr. Henry E. Palmer, Tallahassee.
- 1910—Dr. J. D. Love, Jacksonville.*
- 1911—Dr. A. H. Freeman, Starke.
- 1912—Dr. John S. Helms, Tampa.
- 1913—Dr. P. C. Perry, Jacksonville.
- 1914—Dr. F. C. Moor, Tallahassee.
- 1915—Dr. R. H. McGinnis, Jacksonville.
- 1916—Dr. E. W. Warren, Palatka.
- 1917—Dr. Ralph N. Greene, Jacksonville.
- 1918—Dr. F. J. Walters, La Mesa, Cal.
- 1919—Dr. Wm. E. Ross, Jacksonville.
- 1920—Dr. W. P. Adamson, Tampa.
- 1921—Dr. S. R. M. Kennedy, Pensacola.*
- 1922—Dr. L. M. Anderson, Lake City.
- 1923—Dr. H. Marshall Taylor, Jacksonville.
- 1924—Dr. John C. Vinson, Tampa.
- 1925—Dr. John S. McEwan, Orlando.
- 1926—Dr. H. Mason Smith, Tampa.
- 1927—Dr. John A. Simmons, Miami.
- 1928—Dr. F. J. Waas, Jacksonville.
- 1929—Dr. Henry C. Dozier, Ocala.
- 1930—Dr. Julius C. Davis, Quincy.

*Deceased.

NOTE: Please submit information to complete the above list.

**Names of Presidents for the following years not available: 1874, 1875, 1876, 1877, 1878, 1879, 1880, 1881, 1882, 1883, 1884, 1886, 1887, 1888.



Angebilt Hotel

PROGRAM

of the

FIFTY-EIGHTH ANNUAL MEETING

of the

FLORIDA MEDICAL ASSOCIATION, Inc.

TO BE HELD AT ORLANDO, FLORIDA

MAY 12th and 13th, 1931

INFORMATION

Information desk will be located in the lobby of the headquarters hotel, The San Juan, with continuous service throughout the meeting. All members will be required to register and secure identification badges before attending any of the sessions. Guests and ladies are requested to register. Tickets for the banquet, Tuesday evening, May 12th, may be obtained at the registration desk.

PROGRAM

Monday, May 11th

- 10:00 a.m. Roentgenologists of Florida—San Juan Hotel Room 137.
- 2:00 p.m. Roentgenologists of Florida—San Juan Hotel Room 137.
- 2:00 p.m. Florida Railway Surgeons—San Juan Hotel Ball Room.
- 7:30 p.m. Informal Smoker (Stag)—Chamber of Commerce Bldg.
- 10:00 p.m. Informal Dance—Ball Room, San Juan Hotel.

Tuesday, May 12th

- 9:00 a.m. Golf Tournament at the Orlando Country Club. Participants are requested to wear their identification Medical Association badges.
- 10:00 a.m. 1st General Session—Ball Room, San Juan Hotel.
- 12:00 noon 2nd General Session—Ball Room, San Juan Hotel.
- 12:45 p.m. Luncheons of Fraternities. Alumni Associations. Aeronautic Medical Examiners, etc. (Location of dining-rooms to be announced.)
- 2:00 p.m. Scientific Session—Ball Room, San Juan Hotel.
- 5:00 p.m. House of Delegates—Ball Room, San Juan Hotel.
- 7:30 p.m. Annual Banquet—Chamber of Commerce Bldg. Tickets (\$2.50) may be obtained at the Registration desk.
- 10:00 p.m. Dance—Ball Room, San Juan Hotel.

Wednesday, May 13th

- 9:00 a.m. Scientific Session—Ball Room, San Juan Hotel.
- 12:00 noon 3rd General Session—Ball Room, San Juan Hotel.
- 12:30 p.m. Rotary Luncheon—Chamber of Commerce Bldg.
- 2:00 p.m. Scientific Session—Ball Room, San Juan Hotel.

HOTELS

San Juan Hotel, Convention Headquarters—
 Single, \$3.00 to \$5.00; Double, \$5.00 to \$8.00.
 Angebilt Hotel—Single, \$3.00; Double, \$5.00.
 Fort Gatlin Hotel—Single, \$2.50; Double, \$4.00.
 Colonial Orange Court—Single, \$2.00; double, \$3.50.
 Hotel Roberts—Single, \$1.50 to \$2.00; Double, \$2.50 to \$4.
 Hotel Empire—Single, \$1.50 to \$2.00; Double, \$2.50 to \$3.

PROGRAM FOR LADIES

Monday, May 11th

- 7:30 p.m. Theatre Party. Complimentary tickets obtained at Registration desk, lobby San Juan Hotel.
- 10:00 p.m. Informal Dance, Ball Room, San Juan Hotel.

Tuesday, May 12th

- 9:00 a.m. Registration, lobby San Juan Hotel.
- 12:00 noon Luncheon, Executive Board of the Women's Auxiliary to the Florida Medical Association, Angebilt Hotel.
- 2:30 p.m. Bridge, The Dubsdread Country Club.
- Golf, The Dubsdread Country Club.
- 5:00 p.m. Tea, The Dubsdread Country Club.
- 7:30 p.m. Annual Banquet—Chamber of Commerce. Tickets (\$2.50) may be obtained at the Registration desk.

Wednesday, May 13th

- 9:00 a.m. Woman's Auxiliary, Mezzanine Floor, Angebilt Hotel.
- 1:00 p.m. Luncheon, the Home of Dr. and Mrs. J. S. McEwan, 705 South Delaney St. Hostesses, wives of the members of the Orange County Medical Society.
- 3:00 p.m. Motorcade through Orlando and Winter Park.
- 5:00 p.m. Tea, the home of Dr. Rosalie Slaughter Morton, Winter Park.

TECHNICAL EXHIBITS

Technical exhibits will be located in booths in the lobby and on the mezzanine floor, San Juan Hotel.

The technical exhibits have a real scientific value and physicians who wish to keep abreast of the times and know the latest in drugs and medical appliances should spend some time with these exhibits. It will be surprising the great amount of useful information that can be procured at these exhibits. Many have nothing for sale, the representatives of the firms being there to give the latest information regarding their products. Those who have items for sale will gladly give information whether there is a purchase or not. Be sure to visit the Technical Exhibits.

The following firms have arranged for exhibits at the Orlando meeting:

American Optical Co. Southbridge, Mass.
 H. G. Fischer & Co. Chicago, Ill.
 General Electric X-ray Corp. Chicago, Ill.
 Gerber Products Division. Fremont, Mich.
 Health Products Corp. Newark, N. J.
 Maltbie Chemical Co. Newark, N. J.
 Mead Johnson & Co. Evansville, Ind.
 E. R. Squibb & Sons New York, N. Y.
 Surgical Supply Co. Jacksonville, Fla.
 U. S. Fidelity & Guaranty Co. Baltimore, Md.

OFFICERS OF ORANGE COUNTY MEDICAL SOCIETY

MEREDITH MALLORY, *President*
 G. S. OSINCUP, *Vice-President*
 J. R. CHIAFFELLI, *Secretary*
 C. J. COLLINS, *Treasurer*

LOCAL COMMITTEES

REGISTRATION

L. C. INGRAM, M.D., *Chairman* Orlando Clinic, Orlando
 LOUIS ORR, M.D., *Vice-Chairman* Exchange Bldg., Orlando
 K. C. ASHLEY, M.D. Orlando-Florida Sanitarium, Orlando
 J. F. GARONER, M.D. Winter Park
 H. S. GEIGER, M.D. Kissimmee

PUBLICITY

T. A. NEAL, M.D., *Chairman* 356 N. Orange Ave., Orlando
 P. M. LEWIS, M.D., *Vice-Chairman* Rose Bldg., Orlando
 C. E. COFFIN, M.D. Winter Park
 F. H. HARMS, M.D. 46 N. Orange Ave., Orlando

ARRANGEMENT OF PROGRAMS

G. S. OSINCUP, M.D., *Chairman* 300 E. Colonial, Orlando
 C. CARROLL, M.D. Apopka
 H. B. OERTEL, M.D. 1415 E. Colonial, Orlando

EXHIBITS

HEWITT JOHNSTON, M.D., *Chairman* Exchange Bldg., Orlando
 J. A. PINES, M.D., *Vice-Chairman* Orlando Clinic, Orlando
 L. L. ANDREWS, M.D. Orlando-Florida Sanitarium, Orlando
 H. PERKINS, M.D. Holopaw
 S. A. SHOEMAKER, M.D. 30 E. Church St., Orlando

FINANCE

C. J. COLLINS, M.D., *Chairman* Exchange Bldg., Orlando
 P. T. BUTLER, M.D., *Vice-Chairman* Autrey Arcade, Orlando
 E. J. LAWRENCE, M.D. Winter Garden
 T. M. RIVERS, M.D. Kissimmee

ENTERTAINMENT

H. A. DAY, M.D., *Chairman* Exchange Bldg., Orlando
 H. M. BEAROALL, M.D., *Vice-Chairman*, 119 E. Church St., Orlando
 M. M. ANDREWS, M.D. Orange Clinic, Orlando
 H. BRINSON, M.D. Kissimmee
 T. ALLEN JONES, M.D. Orange Clinic, Orlando
 T. E. MCBRIDE, M.D. Apopka
 SYLVAN McELROY, M.D. 248 S. Orange Ave., Orlando
 D. T. McEWAN, M.D. Orlando Clinic, Orlando

GOLF

J. R. CHIAFFELLI, M.D., *Chairman* 356 N. Orange Ave., Orlando
 S. A. FOLSOM, M.D., *Vice-Chairman* Exchange Bldg., Orlando
 B. A. BURKS, M.D. 108 N. E. Park Ave., Winter Park
 F. D. GRAY, M.D. Exchange Bldg., Orlando
 C. D. HOFFMAN, M.D. Autrey Arcade, Orlando
 W. E. SINCLAIR, M.D. Orlando Clinic, Orlando

BANQUET

C. D. CHRIST, M.D., *Chairman* Orange Clinic, Orlando
 E. T. CRANEY, M.D., *Vice-Chairman*, Orlando Clinic Bldg., Orlando
 J. H. CHILES, M.D. Exchange Bldg., Orlando
 R. F. HOTARO, M.D. Winter Park
 C. J. MARSHALL, M.D. Exchange Bldg., Orlando
 J. L. REOING, M.D. 126 S. Orange Ave., Orlando

EXECUTIVE

G. H. EOWAROS, M.D., *Chairman* Orlando Clinic, Orlando
 G. S. OSINCUP, M.D. 300 E. Colonial Drive, Orlando
 W. H. SPIERS, M.D. Orlando Clinic Bldg., Orlando

LADIES

J. S. McEWAN, M.D., *Chairman* Orlando Clinic, Orlando
 H. W. GWYNN, M.D. Orlando Clinic Bldg., Orlando
 ROSALIE MORTON, M.D. Winter Park
 R. T. WHITE, M.D. 211 S. Rosalind, Orlando

LADIES' COMMITTEE ON ARRANGEMENTS

Mrs. L. C. ORR, *Chairman*

Mrs. G. H. EOWAROS

Mrs. WM. E. SINCLAIR

Assisted by

Mrs. M. M. ANDREWS
 Mrs. K. C. ASHLEY
 Mrs. H. M. BEAROALL
 Mrs. B. A. BURKS
 Mrs. P. T. BUTLER
 Mrs. H. BRINSON
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Mrs. L. C. INGRAM
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 Mrs. E. J. LAWRENCE
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 Mrs. T. E. MCBRIDE
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 Mrs. M. MALLORY
 Mrs. T. A. NEAL
 Mrs. H. OERTEL
 Mrs. G. S. OSINCUP
 Mrs. J. A. PINES
 Mrs. J. L. REOING
 Mrs. T. M. RIVERS
 Mrs. S. A. SHOEMAKER
 Mrs. W. H. SPIERS
 Mrs. WM. E. WESTCOTT
 Mrs. R. T. WHITE

FIRST GENERAL SESSION

Ball Room, San Juan Hotel

TUESDAY, MAY 12TH, 10 A. M.

Call to order, G. H. Edwards, Chairman of Convention Committee.

Invocation, The Reverend Lindsay E. McNair, Pastor, First Presbyterian Church.

Address of Welcome on Behalf of the City of Orlando, The Honorable James L. Giles, Mayor.

Address of Welcome on Behalf of the Orange County Medical Society, Meredith Mallory, President.

Response to Addresses of Welcome, Ralph N. Greene, Jacksonville.

Announcements.

Address of President, "Medical Problems", J. C. Davis, Quincy.

Address (by invitation), "Treatment of Fracture of the Neck of the Femur," (Illustrated), Fred H. Albee, New York, N. Y.

SECOND GENERAL SESSION

Ball Room, San Juan Hotel

MAY 12TH, 12:15 P. M.

President Davis in the Chair.

Report of Officers:

Secretary-Treasurer-Editor, Shaler Richardson.

Executive Committee, L. M. Anderson.

Committee on Legislation and Public Policy, W. M. Rowlett.

Hospital and Medical Education Committee, John E. Boyd.

SCIENTIFIC ASSEMBLY

Ball Room, San Juan Hotel

MAY 12TH, 2 P. M.

Committee on Scientific Work: Herbert L. Bryans, Pensacola, Chairman; J. Q. Folmar, Chattahoochee; W. S. Manning, Jacksonville.

Attention is called to the following By-Laws:

"All papers read before the Association shall be its property. Each paper shall be deposited with the Secretary when read."

"No address or paper before the Association, except those of the President and Orators, shall occupy more than fifteen minutes in its delivery, and no member shall speak longer than five minutes, or more than once on any one subject."

1. "A Clinical Consideration of Intravenous Urography-Uroselectan," Louis Orr, Orlando.

Intravenous urography was made practical in 1929 by Von Lichtenberg using Uroselectan. The method is most useful in cases where ureteral catheterization is difficult or impossible. No surgical intervention on kidney or ureter should be done without investigation with ureteral catheter to determine the presence of pus and blood bacteria, and differential kidney function.

Discussion: E. S. Gilmer, Tampa;
 Roy Holmes, Miami.

2. "Conservative Renal Surgery," Roy J. Holmes and Milton M. Coplan, Miami.

It is remarkable to what extent the so-called "dead" kidney will recover its function after removal of the cause of its impairment. This also applies to kidneys in which the function has been markedly impaired by calculi and by other diseases. There is a marked tendency toward more conservative surgery in urology. A number of cases and lantern slides are presented to illustrate this point.

Discussion: Robert B. McIver, Jacksonville;
 A. R. Knauf, Tampa.

3. "The Post-operative Intestinal Ileus," J. Ralston Wells, Daytona Beach.

Differential diagnosis; etiology; frequency of occurrence; treatment; prognosis.

Discussion: Calvin D. Christ, Orlando;
W. M. Rowlett, Tampa.

4. "Head Injuries," Harold D. Van Schaick, Jacksonville.

Necessity for knowledge of circulation of the cerebro spinal fluid. Mechanism of increased intra cranial pressure. An attempt is made to outline proper treatment based upon the presenting symptoms. The indications for the operative and non-operative treatment. Lantern slides.

Discussion: Vernon A. Lockwood, St. Augustine;
W. E. Whitlock, High Springs.

5. "Roentgen Diagnosis in Bone Lesions," W. M. Shaw, Jacksonville.

The scope of this paper does not attempt to include all bone lesions but deals with a series of cases of more than usual interest that have been observed in routine work for the past several years in Hospital and Office. Emphasis will be placed on cases diagnosed by the X-ray in which the lesion was unsuspected. Cases will be illustrated with lantern slides.

Discussion: Frazier J. Payton, Miami Beach;
John E. Boyd, Jacksonville.

6. "Manual Rotation of Entire Fetus in Occiput Posterior Positions as Substitute for Forceps Rotation," M. C. Wilson, Miami.

No trauma to tissues. Greatly hastens delivery as converts to occiput anterior and then allow normal birth or apply forceps to the occiput anterior position. Need no expensive forceps. Can be done by any general practitioner who can do version or correctly apply forceps to a normally presenting head. Permanently corrects this handicap to normal labor. Is feasible in large majority of these cases.

Discussion: H. L. Pearson, Miami;
Thos. S. Field, Jacksonville.

7. "Importance of Focal Infection as a Cause of Disease," J. E. Gammon, Jacksonville.

Brief discussion of bacterial infection in general, and how the patient gets well of an infectious disease. Discussion of the portals of entry of bacteria into the body, and points of focal infection. Discussion of diseases resulting from focal infection, and how they are treated. Presentation of case histories showing evidence upon which the paper is based.

Discussion: Shaler Richardson, Jacksonville.
Clayton E. Royce, Jacksonville.

MEETING OF HOUSE OF DELEGATES

MAY 12TH, 5 P. M.

Roll Call and Seating of Delegates.

Adoption of minutes as published in May, 1930, Journal.

Election of one delegate and one alternate to A.M.A. meeting (two-year term).

Selection of meeting place of Association for 1932.

Reading of resolutions.

Announcements.

Adjournment.

SCIENTIFIC ASSEMBLY

Ball Room, San Juan Hotel

MAY 13TH, 9 A. M.

8. "Otic Mold Infection," L. C. Ingram, Orlando.

Otomycosis is a common infection in warm moist climates and with pus germ complication causes much suffering. A historical sketch of the earliest reports of the disease and the most recent discussion in the literature of the day. The fungi most commonly found in the disease and the method most likely for them to become parasitic. Symptomatology of the uncomplicated and of the complicated infections. The Diagnosis—Therapy has included a number of remedies but the purpose or plan has been the same, that is, to destroy the fungi and make the ear canal less susceptible to the invasion.

Discussion: Austin J. Kemp, Miami;
H. Marshall Taylor, Jacksonville.

9. "Unusual Ulcerative Condition of the Chest Wall," J. Lee Kirby-Smith, Jacksonville.

A detailed account of continued recurring subdermal abscesses extending over a period of a year and a half, involving a large area of the anterior chest wall. A tentative diagnosis of Tuberculosis Cutis, Scrofuloderma Type has been made. Tuberculin tests, Von Pirquet, positive. Roentgenologist's study of chest negative for disease. By culturing no mycological fungus grown. Detailed examinations by internists negative. A consideration of three separate reports by pathologists. Results of treatment and bibliography.

Discussion: C. A. Andrews, Tampa;
Elmo D. French, Miami;
J. Frank Wilson, Jacksonville.

10. "Observations on Appendicitis," John S. McEwan, Orlando.

This will consist of some remarks on two thousand operations for appendectomy performed by the Orlando Clinic reviewing some of the pertinent facts regarding diagnosis and also procrastination by physicians in not getting many patients to the surgeon earlier.

Discussion: Frederick J. Waas, Jacksonville;
J. W. Alsbrook, Plant City.

11. "Duodenal Stenosis," John S. Helms, Tampa.

Discussion limited to chronic compression of duodenum by the pedicle of the mesentery. The condition is probably not rare. Brief historical resume. Discussion of pathogenesis; congenital and acquired and their mechanisms. Discussion of clinical and roentgenological diagnosis. Treatment, medical and surgical. Illustrative cases. Summary—Bibliographic reference. Lantern slides.

Discussion: John E. Boyd, Jacksonville;
John W. Snyder, Miami.

12. "Colonic Diverticuli in Relation to Carcinoma and Its Prevention," Rosalie Slaughter Morton, Winter Park.

Etiology; Age at which Diverticuli usually appear; Duration; Location; Type of patients; Method of Diagnosis; Treatment. Lantern slide illustrations.

Discussion: J. M. Hoffman, Pensacola;
Harry A. Peyton, Jacksonville;
W. C. Blake, Tampa.

13. "The Use of Free Fascia in the Repair of Hernias," Harry A. Peyton, Jacksonville.

Early work and development of this method of hernial repair. Experimental developments. The need of an adequate method necessitated by large abdominal wall defects following war wounds. Selection of proper types for application of method—not to be used indiscriminately in all hernias. Lantern slides demonstrating technic. Illustrative case reports.

Discussion: John S. Helms, Tampa;
E. H. Adkins, Miami.

14. "Sympathetic Neurotomy for Endocrine Insufficiency," Carleton Deederer, Miami.

A case of premature menopause of long standing was completely relieved following sectioning of the sympathetic nerves of the ovaries. There was evidence of venous spasticity in other parts of the body differing in that respect from the Raynaud syndrome. Remote results nearly 12 years later.

Discussion: M. J. Flipse, Miami;
Louie Limbaugh, Jacksonville.

THIRD GENERAL SESSION

MAY 13TH, 12 M.

President Davis in the Chair.

Election of President.

Newly elected President escorted to the Chair.

Election of first vice-president

Election of second vice-president.

Election of third vice-president.

Election of secretary-treasurer.

Presentation of past-president's button: Henry E. Palmer, Tallahassee.

Adjournment.

SCIENTIFIC ASSEMBLY

MAY 13TH, 2 P. M.

15. "The Enlarged State Board of Health Program," Henry Hanson, Jacksonville.
Brief resume of general health conditions within the state with more specific reference to three factors affecting the economic conditions of our rural communities. Program for extension of health service to the rural communities by development of a full time county health program. A synopsis of the program of the Bureau of Child Hygiene and Public Health Nursing and the general plans of the Malaria Research Division with a brief reference to special activities which have been instituted during the year.
Discussion: M. B. Herlong, Jacksonville;
G. H. Edwards, Orlando.
16. "The Present Status of the Injection Treatment of Hemorrhoids," Leigh F. Robinson, Ft. Lauderdale.
The changing attitude of the profession toward the conservative treatment of hemorrhoids since its introduction is reviewed. A large percentage of internal hemorrhoids may be treated by office methods. It is claimed, however, that the successful application of the injection method requires as much, if not more, experience and surgical knowledge than does the operative procedure.
Discussion: J. Halton, Sarasota;
J. W. Snyder, Miami.
17. "Sterility with Particular Reference to Its Cause, Diagnosis and Treatment," Ferdinand Richards, Jacksonville.
Sterility with particular reference to its cause, diagnosis and treatment, classification of types, male and female, etiological factors, methods of diagnosis, treatment preventative and active with the technique employed.
Discussion: J. M. Bryant, Jacksonville;
W. M. Rowlett, Tampa.
18. "Use and Abuse of Irradiated Ergosterol," Warren Quillian, Coral Gables.
(1) Brief Summary of Occurrence, Preparation and Activation of Ergosterol. (2) Therapeutic Indications. (3) Dangers of Irradiated Ergosterol. (4) Case Report—Describing toxic effects from over-dosage. (This paper emphasizes some facts learned by practical clinical observation and stresses interpretation of results in the light of clinical effect produced).
Discussion: Luther Holloway, Jacksonville;
J. T. Cowart, Tampa.
19. "Traumatic Meningitis," Ralph N. Greene, Jacksonville.
The paper deals with the ominous possibilities of meningitis following skull fracture. The general problem of meningitis as it exists in Florida will also be discussed. Some remarks about treatment are included. A discussion of the quality of serum and the effectiveness thereof, is included. The surgical aspects of traumatic meningitis will be discussed.
Discussion: H. Mason Smith, Tampa;
J. Q. Folmar, Chattahoochee.
20. "Tonsillectomies with a Review of 134 Cases," J. N. McLane, Pensacola.
Synopsis of indications for operation with operation. Average bleeding time and effects of syphilis upon it. Some conditions complicating tonsillectomies—Tuberculosis, Syphilis, Pregnancy, Nephritis, Cardiac Diseases. Complications of tonsillectomies. Hemorrhage and how controlled. Iritis. Results.
Discussion: R. G. Nobles, Pensacola;
H. Marshall Taylor, Jacksonville.
21. "The Importance of the X-ray Examination of the Nasal Accessory Sinuses in Cases of Chronic Cough," J. C. Dickinson, Tampa.
The purpose of this paper is to demonstrate the frequency of chronic infections of the nasal accessory sinuses in cases in which cough and expectoration are prominent symptoms, and to demonstrate that the recognition of the sinuses as the cause of these symptoms is important if permanent lung changes are to be avoided.
Discussion: J. Brown Farrior, Tampa;
L. W. Cunningham, Jacksonville.
22. "Results of Irrigation and Closure in Selected Cases of Non-pyogenic Arthritis," Prescott LeBreton, St. Petersburg.
Suppurative Arthritis common and treatment by drainage well defined; acute infectious arthritis of one large joint with marked symptoms seen at intervals; resistant to expectant treatment. Rapid cessation of acute symptoms after irrigation with weak bichloride solution through small incision.
Discussion: F. L. Fort, Jacksonville;
A. H. Weiland, Miami.

PROGRAM OF THE
TWELFTH ANNUAL MEETING

OF THE

FLORIDA RAILWAY SURGEONS' ASSOCIATION

San Juan Hotel, Orlando

MAY 11, 2 P. M.

OFFICERS, FLORIDA RAILWAY SURGEONS'
ASSOCIATION

President, Gaston H. Edwards.....Orlando
 Vice-President, C. C. WebbPensacola
 Secretary-Treasurer, E. W. Warren.....Palatka

COMMITTEES

Scientific

Thos. H. Bates, ChairmanLake City
 J. Ralston WellsDaytona Beach
 H. A. LeavittMiami

Executive

M. M. Hannum, Chairman.....Eustis
 T. M. McDuffeeManatee
 Walter C. PageCocoa

Necrology

Geo. C. Tillman, Chairman.....Gainesville
 John D. Peabody.....St. Petersburg
 Leon A. PeekWest Palm Beach

Arrangements

J. S. McEwan, Chairman.....Orlando
 Calvin D. Christ.....Orlando
 Gaston H. Edwards.....Orlando

BALL ROOM, SAN JUAN HOTEL

MAY 11TH, 2 P. M.

Call to order, J. S. McEwan, Surgeon, Atlantic Coast Line Railway.
 Invocation, Dean Melville Edw. Johnson, St. Luke's Cathedral.
 Address of Welcome on Behalf of Local Surgeons, Calvin D. Christ, Surgeon, Sea Board Air Line Railway.
 Address of Welcome on Behalf of the City of Orlando, The Honorable James L. Giles, Mayor.
 Response to Addresses of Welcome, L. M. Anderson, Lake City.
 President's Address, "Our Medico Legal Status," Gaston H. Edwards, Orlando.

SCIENTIFIC PROGRAM

Address (by invitation), "Opportunities and Responsibilities of the Railroad Surgeon," Southgate Leigh, Chief Surgeon, Virginia Ry., Norfolk, Va.

1. "General Aspect of Head Injuries and Spinal Injury Cases," Ralph N. Greene, Jacksonville.
Method of handling the patient. Value of X-ray examination. The aspects of spinal puncture. The surgical interference.
2. "Infections in Traumatic Surgery," R. O. Lyell, Miami.
3. "Physiotherapy in the Treatment of Traumatisms," H. M. Strickland, Live Oak.
4. "Sacro-Iliac Pain from the Standpoint of the Railway Surgeon," C. C. Webb, Pensacola.
Few symptoms of injury are as frequently brought to us by sincere and insincere railroad workers as sacro-iliac strain. Therefore, the anatomy, symptomatology, clinical examination, diagnosis and treatment are considered.

GENERAL SESSION

MAY 11TH, 5 P. M.

Report of Committees.
 Election of Officers.



DR. FRED H. ALBEE, OUR HONOR GUEST

Dr. Fred H. Albee needs no introduction. As a surgeon, professor, lecturer and writer, his fame is international. Roumania, Cuba, Spain and Hungary have fittingly recognized his skill by presenting him with decorations of their highest orders.

Dr. Albee was born in Alna, Maine, April 13, 1876. He received his early education in the public schools of Maine, Lincoln Academy, Newcastle, Maine, and Bowden College, from which he secured his B.A. degree. He graduated from the Harvard Medical School in 1903, and later received an Hon. Sc.D. from the University of Vermont, 1916; Sc.D., Bowdoin College, 1917; LL.D., Colby College, 1930. He is chairman of the Rehabilitation Commission of the State of New Jersey; Director and Founder of the Curative Workshop, New York City; Professor of Orthopedic Surgery and Director of the Department of Post-Graduate Medical School, Surgeon in Orthopedic Surgery, Broad Street Hospital and Pan American Clinics, New York City; Consulting Surgeon to Hospital for Joint Diseases, New York, and twenty hospitals in New York, New Jersey, Connecticut, Vermont and Florida, and to the Pennsylvania Railroad, Seaboard Air Line, and Police Department, New York City. He is the author of "Bone Graft Surgery", 1915; "Orthopedic and Reconstruction Surgery", 1919; co-author of "Encyclopaedia Britannica" and "Human Profits of War." Dr. Albee is a member of the leading medical and surgical societies in both the United States and Europe; the American Orthopedic Association, American Medical Association, Pan American Medical Association, International Orthopedic Club, Founding member and Fellow of the American College of Surgeons, Honorary member, Royal Medical Society of Great Britain, Honorary member, Belgian Orthopedic Association, Chairman of the Pan Pacific Medical Association, member of the French Orthopedic Society, and member of the first flying clinic to Central and South America.

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Nassau, Clay, Duval, St. Johns.
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A MESSAGE FROM OUR HOSTS

As we are hosts this year to the Annual Meeting of the Florida Medical Association, we feel that you should know something definite regarding The Orange County Medical Society. It was organized in Orlando, May 26, 1908. The Charter members of the society were Doctors J. Bruce and O. W. King of Sanford; Drs. W. C. Pearson, W. Kilmer, J. D. Rush, C. D. Christ, Sylvan McElroy, George Porter and J. S. McEwan of Orlando. Of these that remain, Dr. W. C. Pearson is an honorary member, while Dr. Christ, Dr. McElroy and Dr. McEwan, the latter a past president, are still with us and active in all matters.

For years it was a custom to serve refreshments at the end of the business session and we feel that the spirit of good fellowship which developed around the refreshment board has kept the friendship of member for member in the society, in a healthy state.

At the time of the organization of the Orange County Medical Society, Seminole County was embraced in the boundaries of Orange County. The membership of the society for the first few years consisted solely of physicians residing in Orlando and Sanford and the meetings alternated between these cities. Later the physicians from Osceola County affiliated with this society, are still on its roster and take an interest in all its activities. So warm has been the fellowship in the society that only recently have the members from Seminole County decided it was best to organize a society of their own.

It is a well known fact that to make any society go successfully, you must have a good secretary. Early in the history of our society one member served for ten years and largely to his zeal and enthusiasm is credit due for the success of this society, during that formative period, and its stability today. The conditions of the roads were such that it required a great deal of time and discomfort for the members to keep up their attendance, but the minutes of the society show during that period the percentage of attendance was better than we have today.

At the outbreak of the World War, six members of the Orange County Medical Society joined the army as medical officers, and two members joined the Red Cross for overseas duty. Dr. P. P. Pillans died in the service.

The coming of the State Organization this May will be the third time in the history of the society that we have entertained the State Association. It is sincerely hoped by every member that the ensuing meeting of the Florida Medical Association will be the largest and best ever had.

A UNIQUE CLINIC TOUR

A four-page insert in the Journal this month announces a Clinic Tour built along quite original lines and sponsored by the State Medical Journals. It differs from the traditional clinic tour in two very conspicuous ways: the individual clinic service by which a man is enabled to see in each city the things that most immediately concern him, and the new range of choice in the matter of transportation. We have joined with the other State Journals in the organization of this party because we believe that the features just mentioned will appeal very strongly to doctors of independent habit of mind and also because it enables us to offer to the membership a tour at practically wholesale prices. Those who already have it more or

less in mind to take a vacation abroad this summer will find the Cooperative Tour very much worth investigating. The Travel Guild has prepared a beautiful booklet describing the tour which will be sent to anyone upon request. Information may also be obtained from any office of the Canadian Pacific Steamship service, since the party is scheduled to sail on the excellent cabin ships of this company, or of the Travel Guild, under whose management the tour is operated.

COUNCILORS' REPORTS

The following reports have been received from councilors who were unable to be present at the pre-convention meeting held in Jacksonville, February 23rd. Reports from councilors in attendance appeared in the March Journal.

FOURTH DISTRICT—J. M. IRWIN, M.D., *St. Augustine*
Nassau, Clay, Duval, St. Johns.

As Councilor of the Fourth District, comprising the counties of Duval, Nassau, Clay and St. Johns, I offer the following brief report:

The two societies in this district, the Duval County and the St. Johns County, are well organized and maintaining their usual activities. Both hold monthly meetings which are well attended and interesting.

From the Duval County Secretary I have the information that in the territory of that society there are twenty-six physicians who are eligible, but not members. In St. Johns County all eligibles are members except one.

FIFTH DISTRICT—EUGENE G. PEEK, M.D., . . . *Ocala*
Citrus, Marion.

I beg to make the following report of Councilor District No. 5, composing Marion and Citrus counties.

Marion County is well organized. Not a single man is practicing medicine in this county that does not belong to the County Society. All are ethical and are doing all they can for organized medicine.

Citrus County is well organized and all the men are members of Citrus, Hernando and Pasco County Society. Citrus County has one man practicing medicine that does not belong to the County Society.

SIXTH DISTRICT—O. O. FEASTER, M.D., *St. Petersburg*
Pinellas.

Pinellas County Medical Society held regular meetings every other Friday from October to May. In addition there were several social meet-

ings. Attendance at the winter meetings was considerably increased by the presence of tourist physicians, many of whom were men of note who contributed greatly to the programs.

Officers for the current year are:

Dr. R. K. O'Brien, President.

Dr. L. M. Gable, First Vice-President.

Dr. W. G. Post, Jr., Second Vice-President.

Dr. O. O. Reaster, Secretary.

Dr. Geo. E. Miller, Treasurer.

EIGHTH DISTRICT—S. D. RICE, M.D. . . . *Gainesville*
Putnam, Levy, Baker, Bradford, Union, Flagler, Alachua.

The Eighth District consists of Putnam, Levy, Baker, Bradford, Union, Flagler and Alachua counties. There are only two medical societies in this district: one in Alachua county which meets in Gainesville, and the other in Putnam county at Palatka.

Alachua County Medical Society meets at noon on the second Thursday of each month and is well attended by physicians of Alachua and surrounding counties, as this society has members in Bradford, Union, Gilchrist and Levy.

For the last year most of the papers have been by local physicians and they have been unusually good and discussed freely.

Several times this society has had instructive moving pictures, illustrating surgical operations, also a week of lectures in January on obstetrics by Dr. McCord of Atlanta.

There are a few men in this county who are not members of this society, one or two who are elderly and a few eclectics.

The Putnam County Society, which meets in Palatka, has only two or three meetings each year, with poor attendance, there being very little interest in organized medicine in this county. Through a faithful few they have a small number of interesting meetings each year.

Most of the physicians of Levy county belong to either the Alachua County Medical Society or the Marion County Medical Society.

Baker county has only a few physicians and those belonging to any society are connected with the Duval county organization.

Several of the men from Bradford and Union counties belong to the Alachua County Society and attend well.

Flagler county has only one physician who belongs to no society.

ELEVENTH DISTRICT—M. JAY FLIPSE, M.D., *Miami*
Dade.

This district comprises the county of Dade and contains but one organized medical society, the Dade County Medical Society.

Several years ago the organization was incorporated in order to simplify the handling of its business affairs. During the last year the membership has consisted of 154 and the meetings averaged in attendance approximately 33 per cent of its members.

The programs presented are of the highest type under the direction of a skillful program committee. A small monthly bulletin is published and mailed to each member about two weeks in advance of the meeting. Because of the strategic location of Miami it has been the privilege of the Dade County Medical Society to have frequent visitors of national reputation in attendance during the winter months. There is remarkably little internal dissension and such problems as have come up have been well handled by the designated officers during the past year in addition to their regular duties.

A number of short radio talks have been broadcast over station WIOD and a conscientious effort is being put forth to forward the end of organized medicine.

No written reports have been received from the following districts:

THIRD DISTRICT—

HENRY M. STRICKLAND, M.D. *Live Oak*
Hamilton, Dixie, Taylor, Madison, Columbia,
Suwannee, Lafayette.

NINTH DISTRICT—J. M. NIXON, M.D., *Panama City*
Holmes, Washington, Bay.

NINETEENTH DISTRICT—

HENRY P. BEVIS, M.D. *Arcadia*
DeSoto, Hardee, Highlands.

TWENTIETH DISTRICT—

WILLIAM R. WARREN, M.D. *Key West*
Monroe.

MEET YOUR COLLEAGUES AT
ORLANDO

MAY 12th and 13th

COUNTY SOCIETY	SECRETARY	MEETINGS				Dues Paid.
		Date	Time	Place	Luncheon?	
Alachua	J. E. Maines, Jr., M.D., Gainesville.	2nd Tuesday	12:00 Noon	White House	Yes.	62%
Bay	Don S. Fraser, M.D., Panama City.					25%
Brevard	I. K. Hicks, M.D., Melbourne.	3rd Tuesday		Varies		67%
Broward	Anna Darrow, M.D., Ft. Lauderdale.	2nd Tuesday	8:00 P.M.	Chamber of Com- merce	No.	100%
Columbia	T. H. Bates, M.D., Lake City.	1st Monday.	7:30 P.M.	Blanche Hotel		50%
Dade	Jos. S. Stewart, Jr., M.D., Miami.	1st Friday	8:30 P.M.	Club Room, Huntington Bldg.	Occasionally.	20%
DeSoto-Hardee- Highlands ...	L. W. Martin, M.D., Sebring.		8:00 P.M.	Varies	Yes.	94%
Duval	Kenneth A. Morris, M.D., Jacksonville.	1st Tuesday	8:15 P.M.	Chamber of Com- merce Building	No.	68%
Escambia	J. M. Hoffman, M.D., Pensacola.	1st Tuesday	8:00 P.M.	Board of Health Building	No.	53%
Hamilton	J. R. Bruce, M.D., Jasper.					
Hillsboro	J. T. Cowart, M.D., Tampa.	1st and 3rd Tues- days	8:00 P.M.	Tampa Municipal Hospital	No.	63%
Jackson	T. H. Hudgens, M.D., Sneads.	2nd Tuesday	3:00 P.M.	Marianna	No.	92%
Lake	W. L. Ashton, M.D., Umatilla.	1st Thursday	12:30 P.M.	Eustis	Yes	100%
Lee	H. Quillian Jones, M.D., Ft. Myers.	3rd Friday	7:30 P.M.	Lee Memorial Hospital	No.	82%
Leon-Gadsden- Liberty- Wakulla- Jefferson	O. G. Kendrick, M.D., Tallahassee.	Quarterly	3:00 P.M.	Varies	Yes.	74%
Madison	Geo. O. Davis, M.D., Madison.					67%
Manatee	A. Q. English, M.D., Manatee.	1st and 3rd Tues. Oct. to May; 2nd Tues. May to Oct.	7:00 P.M.	Dixie Grande Hotel	Yes.	100%
Marion	Thos. H. Wallis, M.D., Ocala.	3rd Thursday	12:30 P.M.	Marion Hotel	Yes.	39%
Monroe	W. R. Warren, M.D., Key West.	1st Sunday	9:00 P.M.	Varies	Yes.	100%
Orange	J. R. Chappell, M.D., Orlando.	3rd Wednesday	8:30 P.M.	Varies	No.	100%
Palm Beach ...	Geo. M. Dawson, M.D., W. Palm Beach.	2nd Monday	8:00 P.M.	Court House	Yes.	60%
Pasco- Hernando- Citrus	Geo. R. Creekmore, M. D., Brooksville.	2nd Thursday	7:00 P.M.	Varies	Yes.	93%
Pinellas	O. O. Feaster, M.D., St. Petersburg.	Every other Friday	8:00 P.M.	500 Power & Light Bldg.	No.	
Polk	Herman Watson, M.D., Lakeland.	2nd Wednesday in Feb., Apr., June, Aug., Oct., Dec.	1:00 P.M.	Lakeland	Yes.	93%
Putnam	E. W. Warren, M.D., Palatka.	2nd Thursday	7:00 P.M.	James Hotel, Palatka	Yes.	60%
St. Johns	A. C. Walkup, M.D., St. Augustine.	3rd Tuesday	8:30 P.M.	Varies	Yes.	100%
St. Lucie-Okeech- bee-Indian River-Martin ..	C. L. Davis, M.D., Okeechobee.	3rd Thursday	8:00 P.M.	Varies	Yes.	73%
Sarasota	F. C. Metzger, M.D., Sarasota.	2nd Tuesday	8:30 P.M.	Varies	Occasionally.	100%
Seminole	J. T. Denton, M.D., Sanford.	2nd Friday	8:00 P.M.	City Hospital		100%
Sumter	W. E. Mitchell, M.D., Coleman.	2nd Tuesday		Varies	No.	100%
Suwannee	W. C. White, M.D., Live Oak.					
Taylor	Jas. L. Weeks, M.D., Perry.	Last Thursday	12:15 P.M.	Eldorado Cafe	Yes.	88%
Volusia	J. Ralston Wells, M.D., Daytona Beach.	2nd Tuesday	7:30 P.M.	Varies	Yes.	79%
Walton- Okaloosa	A. G. Williams, M.D., Lakewood.	3rd Thursday	8:00 P.M.	Varies	Occasionally.	100%
Washington- Holmes	H. A. McClure, M.D., Chipley.					

NOTE—Secretaries: Please submit information to complete the above schedule.

*Florida Medical Association, Inc.*JACKSONVILLE, FLORIDA
P. O. BOX 81SHALER RICHARDSON, M. D.
SECRETARY-TREASURER AND
EDITOR OF THE JOURNALSTEWART G. THOMPSON, D. P. H.
BUSINESS MANAGER AND
DIRECTOR OF EXHIBITS*Application for Space in the*
Technical Exhibit*at the Fifty-eighth Annual Meeting*
*of**Florida Medical Association, Inc.*

SAN JUAN HOTEL

ORLANDO

MAY 12TH AND 13TH, 1931

FLORIDA MEDICAL ASSOCIATION, Inc.

Box 81

Jacksonville, Florida

You are hereby authorized to reserve for our use space in the Technical Exhibit at the San Juan Hotel for the Fifty-Eighth Annual Meeting of the Florida Medical Association, at Orlando, May, 1931.

Our First Choice is Space No. _____; at \$ _____

Our Second Choice is Space No. _____; at \$ _____

Our Third Choice is Space No. _____; at \$ _____

Our Fourth Choice is Space No. _____; at \$ _____

Our Fifth Choice is Space No. _____; at \$ _____

(Make five selections. Space will be assigned in the order in which contracts are received.)

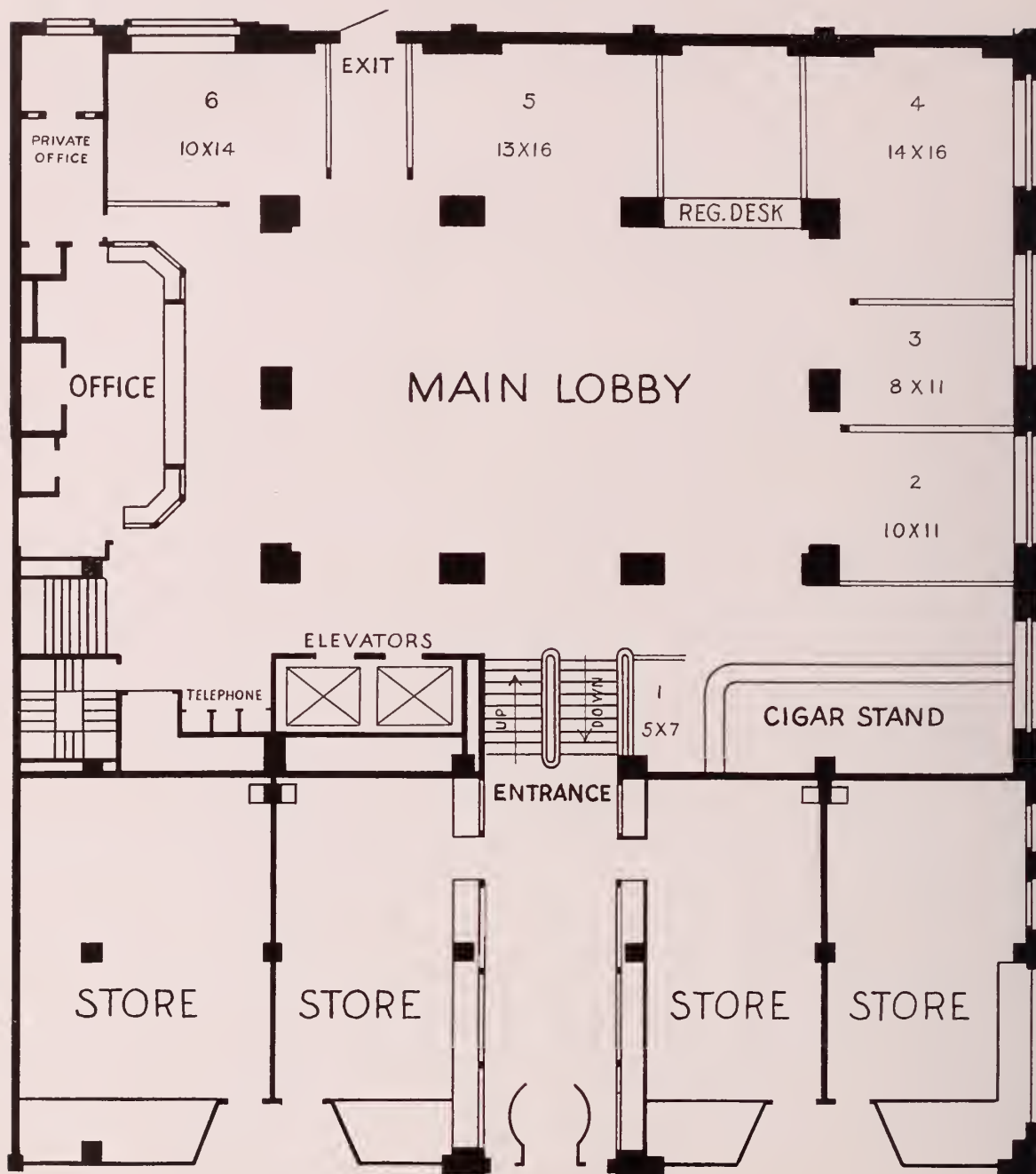
TERMS—Fifty per cent of contract price to accompany this order and the balance to be paid on or before April 1, 1931.

(Firm Name)_____
(Per)_____
(Address)_____
(Name of Person in Charge of Exhibit)

(Print here two-line copy for your identification Sign.)

(Sign Painter's Copy)

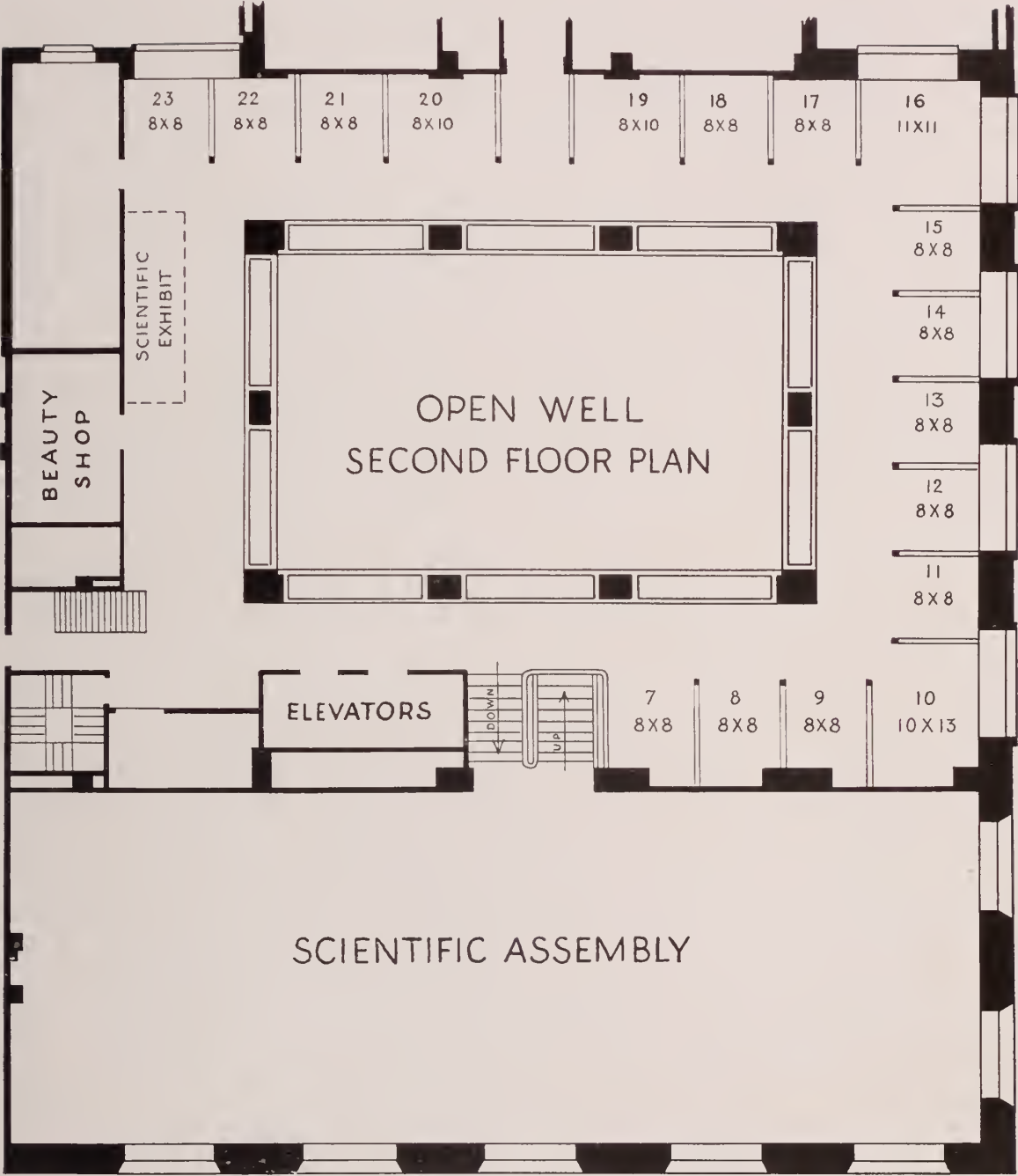
SCHEDULE OF EXHIBIT SPACES AND PRICES
ORLANDO, 1931



SPACE	PRICE
4	\$85.00
5	\$85.00

SPACE	PRICE
1	\$75.00
2	\$75.00
6	\$75.00

SCHEDULE OF EXHIBIT SPACES AND PRICES
ORLANDO, 1931



SPACE	PRICE
3	\$60.00
7	\$60.00
19	\$60.00
20	\$60.00

SPACE	PRICE
All Others	\$50.00

STATE NEWS ITEMS

An educational campaign of nation-wide proportions, planned by the tuberculosis associations of the United States, began April 1, 1931; the war cry being "Fighting the Foe of Youth." Today, as of old, the place for David to strike Goliath is at the point of Intelligence. The best weapon is the stone of Knowledge. For free literature, write your health department or the tuberculosis association.

* * *

Dr. T. Z. Cason of Jacksonville was recently appointed to the Board of Governors of the American College of Physicians.

* * *

Dr. Thomas W. Murrell, professor of dermatology of the Medical College of Virginia, was the honor guest and speaker at the annual dinner of the Hillsboro County Medical Society at the Tampa Terrace Hotel, Tuesday night, January 27th. Members of the Polk County Medical Society were invited guests.

* * *

Notice has just been published of the additional appointment of Dr. C. H. Kirkpatrick of Arcadia as a medical examiner for applicants to attend the Citizens' Military Training Camps.

* * *

The annual smoker of the Pinellas County Medical Society was held March 9th at the Shrine Club in St. Petersburg. This event was well attended as some seventy were present. Guest doctors taking part on the program were from Rochester, Chicago, Pennsylvania, Ohio and Michigan. Local speakers were Doctors J. A. Strickland, Gideon Timberlake and R. K. O'Brien.

* * *

Born to Dr. and Mrs. F. W. Krueger of Jacksonville, on February 24th, at St. Luke's Hospital, a son, John Jay.

* * *

The Third Congress of the Pan-American Medical Association will be held in Mexico City, July 26-31. A Scientific and Commercial Exposition will take place where the Sessions are to be held. More detailed information can be obtained from your executive office, Box 81, Jacksonville.

* * *

Dr. Ralph Greene of Jacksonville read a paper before the Lake County Medical Society at Eustis March 5th.

The Whitehurst case was called in Federal Court at Tampa, March 19th. Dr. E. W. Warren, Palatka; Dr. T. D. Vassar, Lakeland; Dr. C. B. Wilson, Sarasota; Dr. W. M. Rowlett, Tampa, and Dr. Stewart Thompson of Jacksonville were subpoenaed and appeared. The court adjourned before the case was reached and it was, therefore, postponed until the next term of court.

* * *

Dr. W. J. Mayo of Rochester, Minnesota, addressed the Pinellas County Medical Society on "Surgery in Relation to the Autonomic Nervous System" on March 6th at St. Petersburg.

* * *

Dr. Robert S. Lowry, formerly a member of Broward County Medical Society, died in the hospital at Ashtabula, Ohio, recently. Dr. Lowry, one of the oldest physicians in Ft. Lauderdale, left Florida during the past year for Ohio.

* * *

Dr. R. B. Harkness of Lake City recently addressed the Lake City Parent-Teacher Association on "Citizenship."

* * *

Dr. and Mrs. Luther William Holloway of Jacksonville announce the birth of a son, William Robert Slocum Holloway, on January 16th.

* * *

The regular meeting of the Pasco-Hernando-Citrus County Medical Society was held with Dr. George A. Dame of Inverness, Thursday evening, March 12th. After the dinner, the doctors retired to Dr. Dame's office for medical discussions. The members were very much benefited by an address given by Dr. W. W. Whittington of Snow Hill, North Carolina. Dr. Parker, a dentist who is permanently located at Inverness, gave a short address stating that it was necessary for the doctors and dentists to cooperate in their professions. Case reports were given and discussed by the doctors. Dr. T. F. Jackson of Dade City invited the Society to meet with him in April. Those present were Doctors J. T. Bradshaw, Lake Jovita; G. R. Creekmore, Brooksville; Leland H. Dame and George A. Dame, Inverness; L. T. Furrow, Brooksville; J. P. Hudson, Crystal River; W. B. Moon, Crystal River, and visitors, Dr. W. W. Whittington of Snow Hill, North Carolina, and Dr. Parker of Inverness.

(Continued on page 492)

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THE WOMAN'S AUXILIARY PAGE

TO THE
FLORIDA MEDICAL ASSOCIATION, INC.

State Editor
MRS. EDWARD JELKS,
2244 St. Johns Avenue
Jacksonville

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MRS. J. E. TAYLOR, Secy.-Treas.	DeLand

To the Wives of the Members of the Florida Medical Association—Greetings:

All roads lead to Orlando the second week in May, and on those roads there should be many doctors' wives accompanying their husbands to the medical convention. On Wednesday, May 13, is held the annual meeting of the Woman's Auxiliary to the Medical Association of Florida, and as the head of that organization, let me say in the name of all its members, that all the feminine members of a doctor's family are welcome, whether affiliated with an Auxiliary or not. We have a message for them, as they have a vital meaning for us. Let us make it an enthusiastic get-together meeting.

On another page you will read the charming plan of social events which the ladies of Orange County have prepared for us. With such a delightful prospect, we should have a large and interested attendance.

However, there are business matters of vital importance to be presented to the Auxiliary Convention. First and foremost among these is the proposed revision of the Constitution and By-Laws. Copies of this revision have already been sent to the component Auxiliaries for discussion. There are a number of points which should come up for discussion on the floor of the convention. It takes the combined experience and understanding of our whole group of women to decide what is best for our organization, and all members should consider carefully the articles presented in the revision, always keeping in mind the future success and growth of our Auxiliary.

The election of interested and competent officers is a matter of deep concern. I have appointed a

Nominating Committee, consisting of Mrs. Wilburn Lassiter, Gainesville, Chairman, with Mrs. S. E. Driskell and Mrs. M. J. Flipse as members, to canvass the county auxiliaries for official material and to present to the convention names of women eligible for election.

Election of delegates and alternates to the convention of the Woman's Auxiliary, American Medical Association, Philadelphia, June 8-12, is another matter of business. Any one who can possibly attend this meeting is urged to signify their willingness to go as a delegate. To one who has never attended one of these national conventions, there can come no conception of what an intensely interesting experience it can be, and I can not insist too strongly that all who can possibly attend, will do so.

The National Hygeia Chairman, Mrs. R. N. Herbert, is putting over an intensive subscription campaign from March 1 to May 15. Let Florida exert every effort to go over the top, not only for her own good and the good of the magazine, but out of compliment to our own member of the National Committee, Mrs. Herrman H. Harris, also Florida Hygeia Chairman. Hygeia is a magazine that should be not only in every doctor's home but more particularly on the tables of his waiting room, there to combat pernicious and ever-present propaganda. Won't you see that it is placed there?

Now in closing, let me say how much I look forward to seeing and knowing you personally when we all meet in Orlando, The City Beautiful.

With cordial good wishes,

MILDRED WHITE WELLS,
State President.

* * *

VOLUSIA COUNTY

The Volusia County Auxiliary held their last meeting in DeLand, on Tuesday, March 10, at the Hotel Putnam. There was a small attendance on account of bad weather and the busy season but the proposed revised constitution was read and discussed.

* * *

DUVAL COUNTY

The Duval County Auxiliary held its quarterly meeting Wednesday afternoon, March 4, at the
(Continued on page 492)

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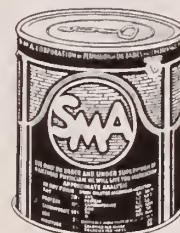


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WOMEN'S AUXILIARY—Continued.

home of Mrs. Horace Drew, with Mrs. William Kirk, President, presiding.

Mrs. Grant D. Harrington, president of Duval County Federation of Women's Clubs, made a talk on the work of the Federation and invited the Auxiliary to federate. The matter will be decided at the next meeting of the organization.

Reports of committees were heard. Copies of the Hygeia Magazine were reported as placed in the Woman's Club, the Public Library and the Y. W. C. A.

Mrs. S. E. Driskell was elected the delegate to attend the State Convention in Orlando May 12 and 13. Alternates chosen were: Mrs. Herrman Harris and Mrs. E. W. Veal. Mrs. Kirk, in the capacity of president, will also attend.

The next meeting was announced for the first Thursday in June at the Seminole hotel.

Mrs. Drew was assisted by members of the social committee in serving refreshments during the social hour which followed the business session.

STATE NEWS ITEMS—Continued.

Dr. and Mrs. Ferdinand Richards of Jacksonville announce the birth of a son, Ferdinand Richards, Jr., on February 18th at St. Luke's Hospital.

* * *

The regular meeting of the Pinellas County Medical Society was held in St. Petersburg Friday evening, March 20th. The program consisted of a paper on "The Clinical Problem of Bronchial Asthma," by Dr. Burton Haseltine of Chicago; a paper on "The Internist's Problem," by Dr. A. W. LaForge of Chicago, one on "The Rhinological Technique, With Moving Picture Illustrations," by Dr. Dean W. Meyers of Ann Arbor, and a paper on "The Physiological Aspect of Asthma," by Dr. Kenneth Phillips of Miami. The unusual program was very interesting and enjoyed by those present.

* * *

Dr. Edward Jelks of Jacksonville recently read a paper before the Jacksonville Civitan Club praising Dr. John Gorrie who as a citizen of Florida in 1850 invented the first machine for the making of artificial ice.

* * *

The following Florida doctors attended the Southeastern Surgical Congress held in Atlanta, Georgia, March 9th and 10th: Robert B. McIver, Kenneth Morris, Gerry Holden, A. M. Sample, Fred Waas and S. E. Driskell of Jacksonville;

(Continued on page 498)

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1931

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of the Annual Meeting of the American Medical Association at
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Special Features

1. **Clinics.** The central idea of this tour is an individualized clinic service. It is recognized that the various members of the party will be interested in widely different fields of medicine and will naturally want especially to see the work abroad that is relevant to their official or unofficial specialty.

Instead, therefore, of mass clinics designed for all to attend, local arrangements will be made to put the doctors in contact with the clinics that particularly interest them. Each is asked, in registering for the tour, to indicate his special field of work and even to mention any specified clinics enroute that he particularly wants to see. The various offices and representatives of the International Travel Guild will then make arrangements in advance for his special benefit. This is a new departure in the operation of clinic tours.

2. **Auspices and Leadership.** The State Journals are known, the world over, to represent the fundamental units of the American Medical Association. Their sponsorship of this tour is a guarantee to foreign clinicians of the authenticity of the tour and importance of its membership.

For the social and clinical leadership of the tour, a man of established reputation in the profession in America will be invited to act as chairman. The advance arrangements in Europe are being supervised by one who has already had wide experience in this work. The forthcoming tour booklet will of course describe the plans for the tour in detail.

3. **Prices.** The tour is genuinely cooperative, and is offered at specially low rates as a service to the membership of the state societies. The tour can be bought at the advertised price **only** through the participating State Journals or direct from the Travel Guild. Compare this tour and its price with any other of the same length, run by a reputable company, using cabin class on the ocean and strictly A-grade hotels on land. It will be found that, quite apart from its clinic features, the price is astonishingly low.

4. **Travel Options.** Just as this tour is unique in its individualized clinic service, it offers also the most interesting choices in transportation on land. At the basal price of \$895, transportation is by rail. But those who wish may make the whole tour by de luxe private automobile (Hispano-Suiza, Rolls-Royce, Minerva) at prices based upon two, three, four, five or six in a car. Since there is regular air-plane service covering almost the whole route of this tour, an opportunity is also given to a limited number to make practically the whole journey by air. For list of prices see the tour booklet that will be sent on request.

5. **Sightseeing.** This is not to be **merely** a clinic tour. The Travel Guild will furnish, on this tour, the complete sightseeing programs offered on their best grades of tours but with hours adjusted so as to interfere as little as possible with scheduled clinics. This phase of the tour is described in outline on the following page. The idea is to give the doctors and their friends **all** that they would get in a best standard tour **plus** an individual clinic service of the highest type.

Itinerary

THE meeting of the American Medical Association in Philadelphia is practically finished on the afternoon of June 11. Those who take this cooperative tour to Europe may leave Philadelphia at 6:14 that evening, arrive in Montreal at 7:20 the next morning and proceed to the S. S. "Montclare" which sails at 10 A. M.

June 12 Sail on the S. S. "Montclare" of the Canadian Pacific Line.

June 20 Due to arrive at Liverpool. By rail through Central England to London.

June 21-27 LONDON, the capital of the World's greatest Empire. Here one whole week is spent. Local sightseeing program in the city and a one day trip through the Shakespeare Country by motor. Also arrangements for clinics at many famous metropolitan hospitals. London is one of the great medical centers of Europe with institutions devoted to most of the chief specialties of medicine

June 27 By night service to The Hague.

June 28 THE HAGUE. The sightseeing here will include the Peace Palace, Maurice House, the House in the Woods, and Scheveningen on the sea. Chief among the clinics here is that of Prof. Jan Shoemaker.
By afternoon train to Amsterdam.

June 29 AMSTERDAM. Standard sightseeing drive around the city and an excursion by boat to the picturesque Isle of Marken, Volendam, etc. Visits will be made here to the public and university clinics.

June 30 By fast train through northern Germany to Berlin.

July 1-4 BERLIN, capital of the newest republic among the Great Powers. A full day of sightseeing in the city by motor and a one day excursion by motor and steamer to Potsdam to see the "New Palace" of the last Kaiser and Frederick the Great's "Sans Souci" palace and gardens. Some of the most famous clinics in Europe are in Berlin in connection with which Dr. Bier and Dr. Sauerbruck are doubtless the best known.

July 5 By rail to Leipzig.

July 6 LEIPZIG. Motor tour around the city, including a visit to the massive battle monument, and inspection of the clinics of the University of Leipzig, one of the largest in Europe.

July 7 By morning train to **DRESDEN**. A motor tour of the city and visit to the Zwinger art gallery containing Raphael's "Sistine Madonna," the world's most famous painting.

July 8 By rail to Prague.

July 9 PRAGUE, capital of ancient Bohemia. A very interesting city sightseeing program including the Hradcany, the old citadel. Visits will be made to the clinics of both the German and Czech Universities and to the Rockefeller Institution here.

July 10-14 VIENNA, the Mecca of all clinicians. Arrangements at the University and the general hospitals of the city under the auspices of the American Medical Association of Vienna. Also a very interesting sightseeing tour in the city and excursions out of town to the beautiful old imperial palace at Schoenbrunn and to the heights of Cobenzl.

July 15 By rail to Munich via the Danube valley and Linz.

July 16-18 MUNICH, famous for its beer! An interesting program of city sightseeing and entree to the great clinics of the city and the university. It is here that Dr. Sauerbruck made his reputation.

July 19 By rail to Zurich via Lindau and Lake Constance, home port of the Zepplins.

July 20 ZURICH, seat of the largest university in Switzerland and the country's chief medical school.
By afternoon train to Lucerne.

July 21 **LUCERNE**, most popular of tourist cities in Switzerland. The principal interest here is in the beauty and charm of the city and the trips into the neighboring mountains. An excursion is made by steamer the whole length of the lake to Fluelen and return.

July 22 By rail over the Brunig Pass and through Interlaken to Berne.

July 23 **BERNE**, the capital of Switzerland. Visit the clinics made famous by Dr. Kocher and Dr. DeQuervain.

July 24 By rail to Paris.

July 25-30 **PARIS**, the most attractive tourist city in the world. Here again general sightseeing interests are fairly coordinate with clinical opportunities. Full sightseeing programs in the city and to Malmaison and the great Palaces at Versailles. Among clinics those of the University of Paris and the American Hospital are most widely known.

July 31 By rail to Cherbourg and sail on the S. S. "Montrose."

August 8 Due to arrive at Montreal.

Those who wish to return to New York or on any subsequent sailing either to Montreal or New York may do so providing berths are available at the time of booking.

The price, which is only \$895, includes minimum rate cabin class (the best class on the ship) in each direction, strictly A-grade hotels throughout Europe, all rail transportation, transfers to and from hotels, railroad stations, steamship docks, etc., handling of a stated amount of luggage, and all sightseeing arrangements, entrance fees and clinic programs.



A special booklet has been prepared setting forth in detail the plans and arrangements for this first co-operative clinic tour. Fill out the following form and send it at once to the editor of this journal or to the Travel Guild, Inc., 180 N. Michigan Avenue, Chicago.

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I am interested in the Cooperative Clinic Tour for 1931. I belong to the _____ State
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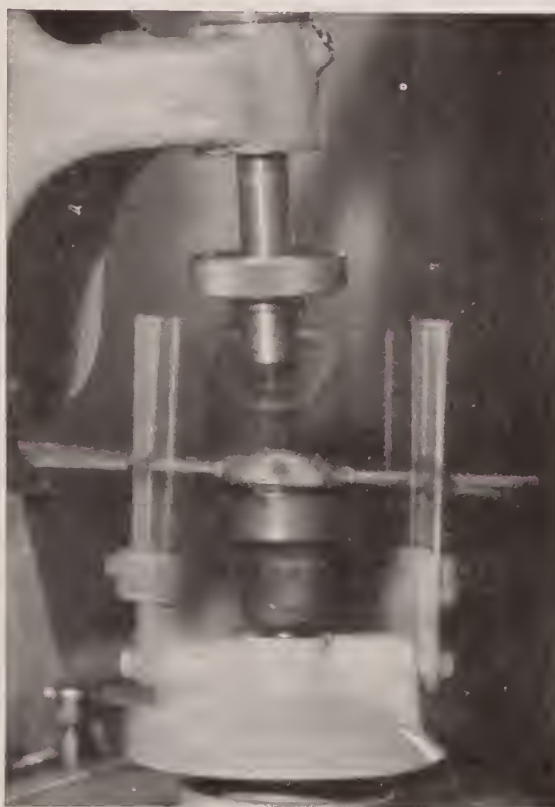
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* * *

The newly elected officers for the St. Johns County Medical Society are as follows:

President—Dr. J. M. Irwin.

Vice-President—Dr. A. C. Walkup.

Secretary—Dr. Reddin Britt.

Treasurer—Dr. S. A. Scruggs.

Delegates to House of Delegates—Dr. Gordon Stanton and Dr. G. Walter Potter.

* * *

Dr. Louie Limbaugh of Jacksonville was the principal speaker at the monthly meeting of the medical staff of Duval County Hospital, March 17th. Dr. Limbaugh reported a series of pulmonary tuberculosis cases treated with artificial pneumothorax. Dr. J. L. Williams of Jacksonville was introduced as chief of the staff's department of dentists. Dr. J. Knox Simpson, Jacksonville, chief of the medical staff of the hospital, presided at the meeting.

* * *

Irl Emanuel Martin, Jr., 9-year-old son of Dr. Irl E. Martin of Ft. Ogden, died in the Arcadia General Hospital February 23rd. The cause of death was given as broncho-pneumonia.

* * *

The United States Civil Service Commission announces the following-named open competitive examinations:

Senior Medical Technician (Bacteriology or Roentgenology), \$2,000 a year; *Medical Technician* (Bacteriology or Roentgenology), \$1,620 a year. The examinations are to fill vacancies in the Veterans' Administration. There is a vacancy at Tuskegee, Ala., in the position of laboratorian (senior medical technician) in roentgenology, for which colored persons are urged to apply. Competitors will not be required to report for examination at any place, but will be rated on their education and training, and on their experience. Full information may be obtained from the United States Civil Service Commission, Washington, D. C.

* * *

Dr. Louie Limbaugh of Jacksonville was recently made a fellow of the American College of Physicians.

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APPALACHIAN HALL, ASHEVILLE, N. C.

CONVENTION NEWS

Doctors who are interested in meetings of medical fraternities or alumni of medical schools at the Fifty-eighth Annual Convention in Orlando next May are requested to communicate with Dr. G. H. Edwards, chairman of the general committee, who will arrange for suitable times and places for such meetings. Dr. Edwards' address is care Orlando Clinic, Orlando.

* * *

The Florida Association of Aviation Medical Examiners will hold its first annual meeting with the Florida Medical Association, May 12, 1931, at noon. Dinner will be served at the Angelbilt Hotel. Members should early advise Dr. L. C. Ingram, Chairman of the Registration Committee, of their intention to be present so that he may determine the number to expect. Dr. H. C. Cooper, Medical Director of the Aeronautics Branch of the Department of Commerce, will be the guest of honor.

* * *

Please notify Dr. G. H. Edwards, Chairman of the General Committee, Orlando Clinic, Orlando, as soon as you make your decision to attend the Annual Meeting in May. If the general chairman is notified in advance, your room assignment at the hotel will be much more satisfactory and you will save time when you arrive. The hotel managers will very much appreciate your notifying Dr. Edwards as early as possible.

* * *

Dr. J. R. Chappell, Box 1370, Orlando, as chairman of the Golfers' Committee, would like to get in touch with all doctors who desire to play at the Annual Meeting in May at Orlando. It is planned to play on Tuesday and award prizes at the banquet that evening.

FOR SALE—Complete clinical laboratory equipment. Property of the late Dr. V. M. Jared of West Palm Beach. Up-to-date and in perfect condition. Excellent opportunity for Pathologist. To be sold intact preferably. Address Box 1956, West Palm Beach, Florida.

LOCATION WANTED in town of 5,000 population or over by general practitioner and surgeon, age 40, who formerly practiced for five years in Florida. Has been out of the state for two years. Write M.D., care Florida Medical Journal, Box 81, Jacksonville.

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May 12 and 13, 1931

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Squibb also markets Diagnostic Pollen Allergen Solutions which are used for determining the causative pollen.

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THE JOURNAL

— OF THE —

Florida Medical Association, Inc.

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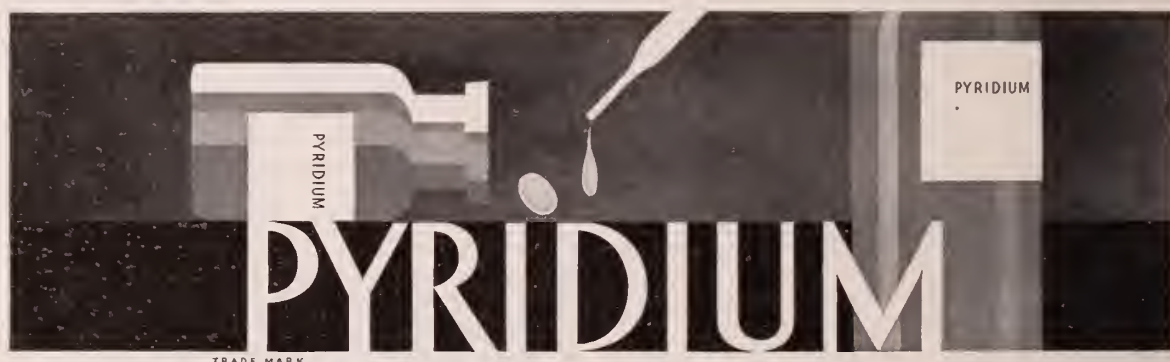


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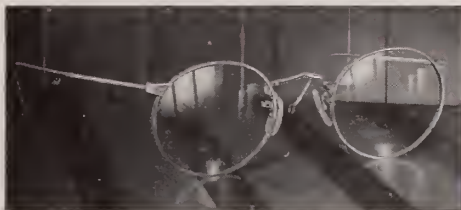
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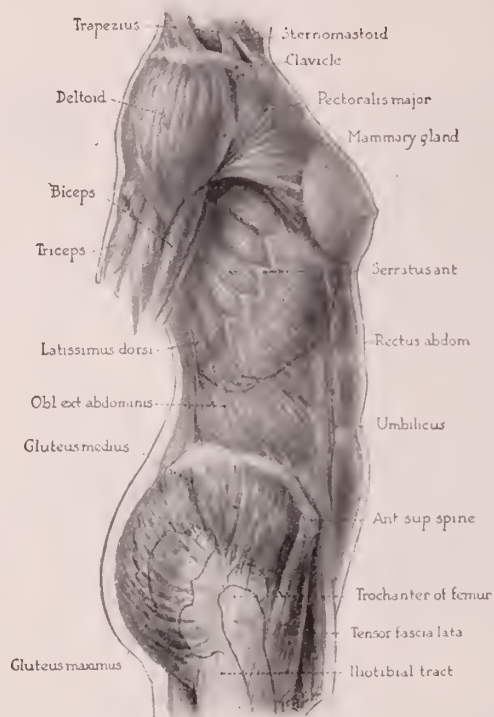
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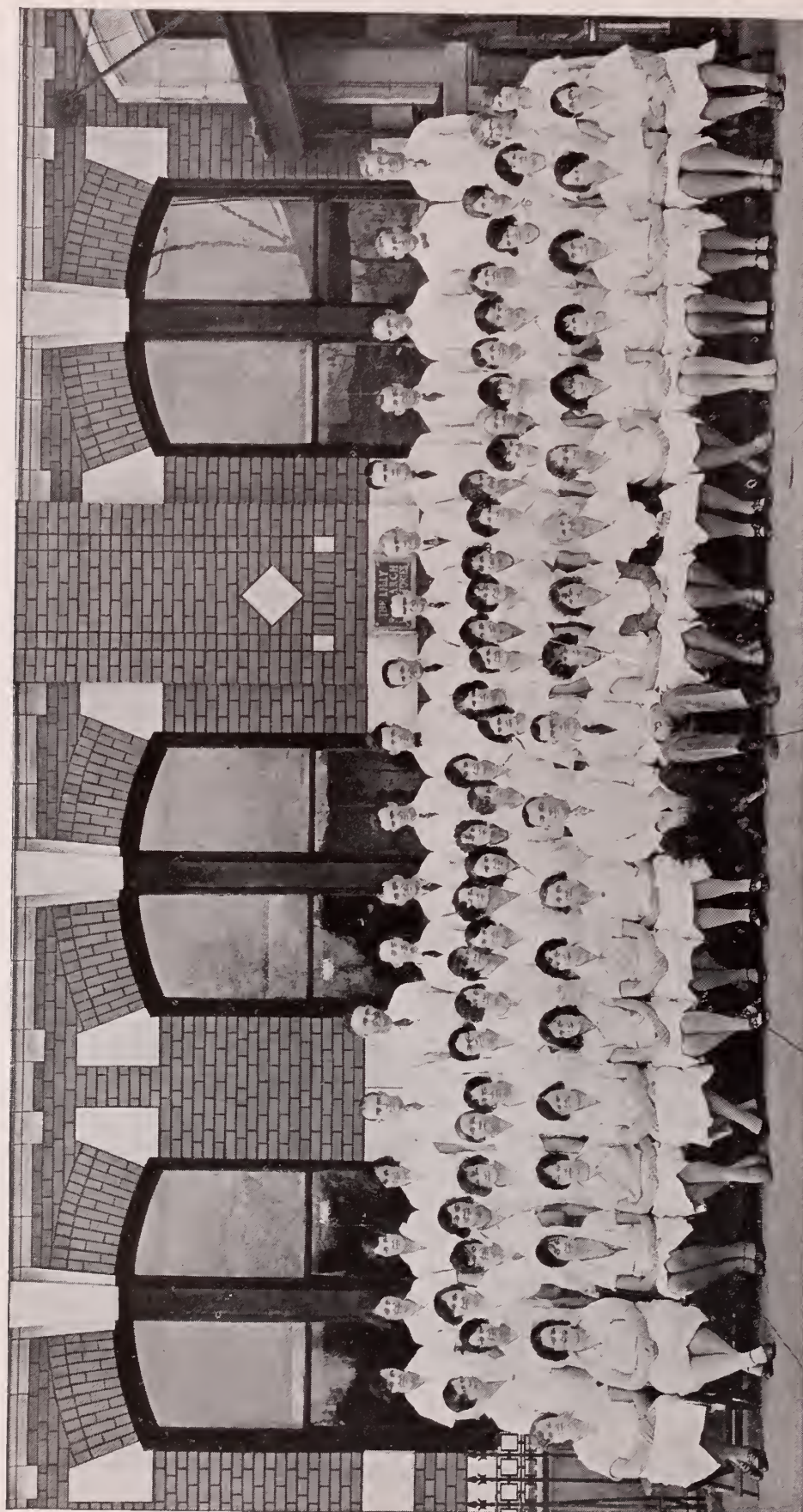
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THE JOURNAL OF THE FLORIDA MEDICAL ASSOCIATION

PUBLISHED MONTHLY

Volume XVII

Jacksonville, Florida, May, 1931

Number 11

President's Address*

MEDICAL PROBLEMS

JULIUS C. DAVIS, M.D., F.A.C.S.,

Quincy.

*Members of the Florida Medical Association,
and Guests:*

As my term of office draws to a close, I wish once more to express to you my gratitude and profound appreciation for the distinct honor accorded me—for the privilege that has been mine to serve as president of the Florida Medical Association during the year. While the responsibilities of the office are great, and I entered upon them fully conscious of the magnitude of the undertaking, I recognize that it is no small distinction to be chosen as the official head of the organization represented by the best element in the medical profession of the state.

During my tenure of office I have not deemed it my function to dictate the policies of the Association, but to cooperate with my associates in the advancement of the best interests of the organization. To the untiring efforts and loyal support of committeemen is due in a very large measure the credit for anything of a worth while nature accomplished during the year.

In our modern social life the preservation of individual and public health demands vigorous and concerted action by the medical profession. The change in the social and economic conditions of the day make it imperative that we assume new problems and responsibilities.

I have considered a number of subjects for the title of this address but found it difficult to adhere to the subject matter and at the same time express to you just what I wished to say. As a result I have chosen the broad subject, "Medical Problems," realizing that I can only, in a limited time, give a brief summary.

It would be almost impossible to name all the numerous medical problems confronting us at the present time, but a few which I consider the most outstanding are ETHICS, MEDICAL LEGISLATION,

PATERNALISM AND PUBLICITY.

In order to visualize our various problems it is necessary that we fully understand why a medical association exists; what its purposes and functions are. There is no doubt in my mind that this organization was formed by men of broad vision, with an insatiable desire for knowledge, for the promotion of harmony and for the encouragement of fraternity; whereby men might be brought to know each other better, to appreciate the good qualities which might otherwise be overlooked and to foster mutual understanding and esteem. The necessity for such an organization is illustrated by the fable of the fagots, that in unity there is strength.

Rendering a service to humanity is the chief purpose of the organization; serving the medical profession secondary. The prime object of our meetings is the search for medical information, practically the entire program being consumed by scientific papers and their discussion; so much so in fact that the business end is almost neglected. But, having accomplished nothing more than this, I feel that we are amply repaid for our efforts.

Now with regard to our problems. In discussing ethics I realize full well that I am dealing with a very delicate matter, but it is my firm conviction that this subject is responsible for many of the obstacles retarding the progress of organized medicine. Many desired changes in the attitude of the laity toward our profession would no doubt take place if our attitude toward our brother physicians were changed. A doctor, too often, is the victim of petty jealousies and the mark for the arrows of a rival faction. Again the doctor is the victim of envy, that pain of the soul, according to Plato, which should never for a moment afflict a man of generous instincts who has a sane outlook on life.

The public often judges the entire profession

*Delivered before the Fifty-Eighth Annual Meeting of the Florida Medical Association, held at Orlando, May 12, 13, 1931.

by the character and habits of one doctor. The facts of his life are as well known as are those of the movie star; his every act is open and subject to criticism and frequently misjudged. For this reason it behooves us to so conduct ourselves that the finest and best traditions of the profession be jealously guarded.

An example of how discord may be created among members of the profession and the reason for scepticism upon the part of the laity is cited: A patient from a small town consulted a well-known internist in a city. Following completion of an examination the patient was advised that it was necessary to have an autogeneous vaccine made and that it would also be necessary for the patient to remain in the city for several months for its administration, as he (the internist) could not even allow his highly competent nurse to give the hypodermic, much less trust a doctor in a small town with such a serious matter. The story of his wonderful personal treatment was repeated in the town in which the patient resided, and the physician, even though he advertised himself to the people of that community, incurred the enmity of a number of the local physicians by discrediting their ability.

The World War taught us that many delicate operations can be performed with skill and dexterity outside of marble and stone walls and by others than renowned specialists. The laity often has mistaken ideas of physicians and hospitals, feeling that while all work done in the great hospitals of the cities is par excellent, that only inferior work is possible in the smaller institutions. Do not misunderstand me and conclude that I would belittle excellent clinics and well equipped institutions. I am merely calling attention to the fact that much good work is being done in the small, unrecognized hospitals in the rural districts.

Elimination of discord by the creation of good fellowship and substituting therefor friendly rivalry based upon the character of the work, rather than upon individual triumph, is to be welcomed.

One of the greatest drawbacks to the standardization of the various healing arts through Medical Legislation is the fact that the laity is fully aware of the rift in the profession. Is it any wonder that legislators will not heed a divided body, when the cults are so well organized? This is the reason so many of our hospitals are unable to raise their standards.

There is no doubt that the average member of our legislative bodies earnestly desires to give

support to the enactment of proper and necessary laws, but propaganda on the part of the cults has its influence. Our county medical societies have by long tradition, and often by the dictates of their constitutions, steered clear of so-called politics. These are wise provisions, except where political situations vitally affect medicine or health. We are prone to blame the legislature for failure to look with favor upon our wishes, when as a matter of fact the fault too often lies with our own profession. Legislators and county officials are of opinion that doctors do not know what they want, that they do not stick together and consequently can be ignored. We will continue to be ignored as long as we persist in drifting as individuals. I have suggested during the past year that every county medical society have a legislative committee the duty of which would be to confer with legislators with reference to proposed medical or public health legislation. Public officials will not be indifferent to a compact organization dealing with legislative and political problems in a business-like manner and speaking as a unit.

The point I wish to emphasize is that the various representatives must be educated by the medical profession to the extent that they will seek our counsel and advice before committing themselves on matters that the profession is more competent to judge than the laity.

The erroneous statement by Elbert Hubbard in his "Dissertation on Quacks" that "Doctors are organized not to rid the land of quacks but competitors and the quack of today is a regular of tomorrow" is still the prevailing opinion of many people.

I feel that during the present session of the legislature we have accomplished much more by being on the defensive than by trying to put through measures such as basic science laws, etc. We have been able to kill the naturopathic bill which would enlarge their field of activities; have defeated the bill regarding the licensing of ex-marine or retired army officials through reciprocity whereby our state would be filled with undesirable. We approved the proposed chiropractic bill which raises their standard and killed the bill reducing the lunacy fee from ten to five dollars. With the cooperation of our physician senators and representatives, the above has not been difficult.

We expect too much of our physicians in the Senate and House. It is impossible for them to force legislation when their fellow members have

much pressure brought to bear by the various cults and their supporters. I can talk to my own Senator and Representatives and they will consider and vote favorably on any measure we suggest after they have considered it meritorious. However, members from another county are not going to listen to physicians from a foreign county. This was thoroughly demonstrated two years ago when Senator Dell had assembled a few of the senators for me to explain the proposed Basic Science Act. A personal friend of mine from another county remarked that he could not support the measure when so many of his supporters at home were in sympathy with the opposing forces. The apathy of the medical profession was thoroughly demonstrated by the fact that not a physician in that county approached his representatives on behalf of any medical legislation.

In Florida, famed for its exposition of the superlative in modern civilization, we should be rid of the waste and inefficiency due to disease. With our climatic conditions we should be able to boast that ours is the most healthful state in the Union, but such is not true. It is at this point that I wish to endorse and ask for your cooperation in behalf of the county health unit program as has been outlined by our State Health Officer, Dr. Henry Hanson. I trust that you will individually and collectively work to secure the enabling act giving to the counties the right to establish and support such units. This is our opportunity for service to all, and in so doing we render a service to ourselves. Adequate public health service should give to every child the right to freedom from curable defects and of wholesome surroundings. Funds properly expended for this service will produce results as valuable to the citizen as money in the bank.

I am informed by good legal authority that Florida has very drastic medical laws with regard to illegal practitioners of medicine and yet the question continually arises as to who should be the prosecutor for violations of these statutes. The State Medical Association, the State Board of Health and the State Board of Medical Examiners do not take the initiative. It is not their duty to apprehend law violators. Why should we? Certainly no other organization or society feels it incumbent that it apprehend and prosecute criminals. Our statutes make ample provisions for the prosecution of law offenders in the personnel of prosecuting attorneys, sheriffs and judges. We have fulfilled our duty to society

when we have reported irregular practitioners to the prosecuting attorney.

Prompt action is made possible through early notification. The longer notification is delayed, the less the possibility of conviction. By delay, you have incurred public sentiment in favor of the offender. We realize in most cases it is useless to attempt action after a period of years has elapsed as public sentiment will then be crystallized in favor of the offender.

We have been warned against the ever-increasing tendency toward Paternalism. It is the opinion of Dr. William Gerry Morgan, president of the American Medical Association, "that we are steadily weakening the character of the individual." "There are certain matters pertaining to the health of the citizenry of any country that can be administered more advantageously by the government, whether nation, state or municipal, than by the medical profession in groups or individually. This is proven by the United States Public Health Service, the functions of which now include (1) protection of the United States from the introduction of disease from without; (2) prevention of inter-state spread of disease and suppression of epidemics; (3) cooperation with state and local boards of health in health matters; (4) investigation of the diseases of man; (5) public health education and dissemination of health information. To such manifestations of government control there can be no reasonable objection. It is hoped that no encroachments on private rights will ever be made by this splendid agency of our government. No scheme has yet been evolved that has demonstrated the advisability of going the limit in the matter of government control over individual health maintenance."

"We are not willing to accept the view expressed by some that public health or preventive medicine has practically no limits. We are not willing to see the entire population, with exception of the rich, taken away from the individual physician, whether he be family doctor or specialist, and turned over to the salaried physician, who by virtue of the circumstances under which he must render his service, will not be able to devote to the individual patient the careful study that may be necessary."

Dr. Hugh S. Cumming in his presidential address before the Southern Medical Association at Louisville stated: "I see no justification for despair because of changing conditions. Change and evolution are inherent in the physical and

spiritual universe. The remarkable rapidity of new discoveries in the arts and sciences and their application not only have revolutionized transportation, industry, education, but have through necessity compelled a different conception of the individual's relationship and duty to his fellow man, and of what group, local, state or national, shall do for itself through its government or group action."

"It not only lies within our power but it is our high duty wisely to direct and guide the government and people to an unselfish solution of the problems of preventing or curing illness and suffering and increasing the efficiency, health and happiness of our fellow man."

Paternalistic medicine can no doubt be combated by cooperative contact with lay organizations and by taking medical leadership in health matters. Unified action on the part of the medical profession is essential to maintain this leadership. We have been too conservative in not taking the leadership in health activities.

It is the general opinion of the medical profession that publicity measures are necessary to educate the laity in the nature, purposes and results of the efforts made by scientific medicine for the prevention, control and cure of disease.

In endeavoring to carry out the policies advocated by Dr. H. C. Dozier in his presidential address of last year, the Executive Committee, with an additional committee designated as the lay educational section, has worked unceasingly. Their report to be made subsequently demands

serious study and is deserving of our earnest consideration.

Illinois and Minnesota have a similar program and they are confident that the public derives the greatest benefit from the health education program. Its success in these states is attributed to the fact that there is almost one hundred per cent of organized medicine.

Confidence in the knowledge and skill of the members of the medical profession will be more permanently established when the people have a better understanding of the source of our knowledge and the methods by which it is acquired. Confidence in a scientific medicine is a problem with which the entire profession is concerned.

To attain the best results for our patients, for ourselves and for our profession, we must eliminate misunderstandings and unpleasant situations which doctors often bring upon themselves, by a little more thoughtfulness, a little more discretion, a little more brotherly love and a little more harmonious cooperation.

One of the greatest pleasures that has come to me has been the work with my colleagues. Your friendship and that of others of the medical profession whom I have learned to know and esteem has been a source of inspiration to me. During my administration I have no doubt made some mistakes, but since to err is human I trust that my faults will be written only upon the sands; that you will recognize that they were of the head and not of the heart.

PROCEEDINGS

of the

FIFTY-EIGHTH ANNUAL MEETING

of the

FLORIDA MEDICAL ASSOCIATION, Inc.

HELD AT ORLANDO, FLORIDA

MAY 12th and 13th, 1931

The Fifty-Eighth Annual Meeting of the Florida Medical Association was called to order at 10 a. m. in the auditorium of the San Juan Hotel at Orlando by Dr. G. H. Edwards, chairman of the Convention Committee. The invocation was rendered by The Reverend Lindsay E. McNair, Pastor, First Presbyterian Church, Orlando. The address of welcome on behalf of the City of

Orlando was made by The Honorable James L. Giles, Mayor. In the absence of Dr. Meredith Mallory, president of the Orange County Medical Society, the address of welcome on behalf of the entertaining society was made by Dr. G. S. Osincup, vice-president. The welcome was responded to on behalf of the Association by Dr. Ralph N. Greene of Jacksonville. Dr. J. C. Davis

of Quincy then delivered the annual presidential address, the subject of which was, "Medical Problems." Dr. Fred H. Albee of New York, N. Y., having been invited as the guest of honor, delivered an address on, "Treatment of Fractures of the Neck of the Femur," (illustrated with motion pictures).

This concluded the First General Session of the meeting.

SECOND GENERAL SESSION

The Second General Session convened in the auditorium of the San Juan Hotel at 12:15 p. m., May 12th, and was called to order by the president, Dr. J. C. Davis of Quincy.

The following joint report was read by Dr. Shaler Richardson:

JOINT REPORT OF SECRETARY-TREASURER-EDITOR OF THE JOURNAL, DR. SHALER RICHARDSON, AND BUSINESS MANAGER, DR. STEWART G. THOMPSON

*To the President and Members of the Florida
Medical Association in Session at Orlando,
Florida:*

GENTLEMEN:

MEMBERSHIP

A total of 1,046 members has been reported by the secretaries of component societies. Of this number, 964 paid their annual dues for the calendar year 1930. During the year, five of our members were taken by death before paying their 1930 dues; five moved to other states in the north and eighty-three were automatically dropped, not having paid state dues since 1929, as shown by exhibit "F". There is, therefore, a shrinkage of fifty-six paid members as compared with the previous year. Your officers feel, however, that this is rather a creditable showing under the conditions existing. The affairs of organized medicine have not suffered during the depression in anything like the proportion of many other corporations.

IMPOSTORS

On two occasions, beneficial information was disseminated through the business office of your Association to the secretaries and presidents of component societies relative to impostors who were preying upon our membership. Splendid results were obtained according to many reports received later. In the first case, a man by the name of Alston, representing himself from the

Florida Press Service, claimed to be establishing a press morgue of the men in the state who were more or less officials. After the information relative to this impostor was broadcast to our membership, solicitations were discontinued. One of our members advised us afterwards that this notification from the business office saved him more than enough to cover his dues to the state and county societies as well as municipal and other fees for the entire year. It seems that this doctor had given the impostor a post-dated check and when the circular letter reached him, giving the status of the man Alston, he instructed the bank not to honor the check. From the responses this impostor received to his early solicitations, his fraudulent collections would apparently have been enormous had he been allowed to continue with no warning to our membership.

The other case was a man who styled himself as Dr. J. W. Phares and Dr. H. C. F. Kellner. He always told the same story of ill fortune, we are advised, collected what he could from individual doctors, asked for work as associate internist but never reached the hospital where appointments were made for him.

Prompt notification to the business office of your Association in cases of this kind will give us an opportunity to notify the secretaries of the component societies who will, in turn, notify the members and be a real service to all concerned.

GROUP LIABILITY INSURANCE

Your Executive Committee secured a master policy which will make possible for members of the state Association to take out malpractice insurance with the United States Fidelity and Guaranty Company of Baltimore at a uniform premium rate which will represent a substantial saving to all of our members desiring protection. Members save in premium under this policy, in many instances, more than annual dues to the state Association. This is another service included in your annual state dues.

INVESTMENT

United States Treasury bonds to the extent of \$10,000.00 were purchased by order of the Executive Committee and have been placed in the custody of the Trust Department of the Atlantic National Bank, Jacksonville. The bonds are securely protected and the interest derived therefrom will be deposited to the account of the state Association as the coupons come due. The bonds are held in the name of the Association under the signature of your treasurer, who is duly bonded.

FLORIDA MEDICAL ASSOCIATION, INC.

Total members who have paid state dues
~ 1918 to 1930 inclusive ~

Year	Total	M e m b e r s				
		0	200	400	600	800 1000
1930	964					
1929	1020					
1928	1068					
1927	1106					
1926	1018					
1925	645					
1924	536					
1923	482					
1922	271					
1921	545					
1920	524					
1919	396					
1918	409					

JOURNAL

The circulation of the Journal is well over 1,100. It has been mailed each month during the past year to every bonafide member of the Association, advertisers, subscribers and as an exchange with other state medical Journals throughout the United States. Original articles have been contributed by our members in sufficient numbers to fill a well-balanced publication. An unusually large number of papers have been illustrated in an acceptable manner, adding interest to the articles as well as making the entire Journal more attractive.

Your Committee on Publication deserves special commendation; Dr. G. H. Edwards, chairman, and Dr. Roy Holmes served with the editor. Every original article submitted has been reviewed personally by each of the three members of the Committee. A generous contribution of

time and effort was required in the work of reviewing and editing. The care with which the work has been done, as well as the prompt return of the articles, has been very much appreciated. The effort put forth by this Committee, as a contribution to the Journal, deserves special mention.

Through the efforts of your business office and the Cooperative Medical Advertising Bureau of the American Medical Association, a proportionately large number of regular advertisers have used the Journal and thereby increased the revenue of our treasury to the extent of \$3,597.17 during the past year.

News items speak for themselves. Newspapers from all over the state have been searched regularly each month for news pertaining to the members of the Association. The secretaries of the various component societies have been very thoughtful in utilizing the news item postal cards for sending

in news items and a great many have regularly contributed information concerning monthly meetings during the year. News item postal cards are always enclosed with circular letters going to the membership and in this way additional items of interest have been secured from the membership for the state news columns.

One entire page, and often a page and a half, has been allotted to the Woman's Auxiliary, the material being contributed through Mrs. Edward Jelks, their state editor. The interest in the Woman's Auxiliary page is evidenced by the requests for the Journal received from different states and representatives of the American Medical Association Woman's Auxiliary.

EXHIBITS

At the Pensacola meeting last year, \$710.00 was secured through your business office for sale of exhibit spaces. As this report was being prepared, a total of \$725.00 had been contracted for by exhibitors. Space has been donated and set aside for scientific exhibits, including that of the State Board of Health.

FINANCES

The financial condition of your Association is portrayed in detail in the attached statements which have been prepared from the official books and audited by a firm of certified public accountants. These show: dues collected, \$7,790.00; earnings from advertising, \$3,597.17; subscriptions and miscellaneous sale of Journal, \$32.50; interest on savings accounts, \$404.29; and gross income from technical exhibits, \$755.00. Cash balance on hand as of April 20th, 1931, was \$9,348.74. This cash balance, together with miscellaneous income, will take care of our working budget of \$13,417.50 during the coming twelve months and leave a small surplus, provided there are no changes contemplated.

FORD, FISHER, BOYD & COLLEY
ACCOUNTANTS AND AUDITORS

TELEPHONE
5-5872

LYNCH BUILDING
JACKSONVILLE, FLA.,
May 6, 1931.

DR. SHALER A. RICHARDSON,
Treasurer, Florida Medical Association,
Jacksonville, Florida.

DEAR SIR: This is to certify that we have examined the attached statements of Cash Receipts and Cash Disbursements for the period from April 22, 1930, through April 20, 1931. These statements have been prepared by Dr. S. G. Thompson, Business Manager of the Florida Medical Association and the Florida Medical Journal, and correctly reflect the total amounts received and disbursed as shown by the books.

In accordance with your instructions, we have checked the total of the collections shown by the statements with the corresponding total shown by the books, and found them to be in agreement.

Cancelled checks were examined and compared with the entries in the Cash Disbursement Book; the Cash Book was added and all postings checked to the General Ledger; and the General Ledger was added and a Trial Balance taken off as of April 20, 1931.

Bank Accounts were reconciled with the bank statements.

As we do not have access to the records of the various County Societies for the purpose of checking the remittances for dues, attention is directed to Exhibits D and F which show the amounts received from each County Society during the year and dues cancelled, respectively. The inspection of these Exhibits by the officers of the respective Societies will enable them to verify the correctness of the remittances and cancellations shown.

Income from Journal advertising was verified substantially by an examination of the contracts with advertisers.

On March 26, 1931, the Association issued its check for \$10,188.44 in payment of

Ten (10) U. S. Treasury Bonds, par value of \$1,000.00 each.
Interest Rate $3\frac{3}{4}\%$
Accrued interest at the date of purchase amounted to \$10.31, leaving the net cost of the bonds.....\$10,178.13

The bonds have been inspected by us.

In conclusion, we are again glad to report that the books and records of the Association have been well and neatly kept throughout the year.

Yours very truly,

FBC:W

FORD, FISHER, BOYD & COLLEY.

CONSOLIDATED CASH STATEMENT April 22, 1930, through April 20, 1931.

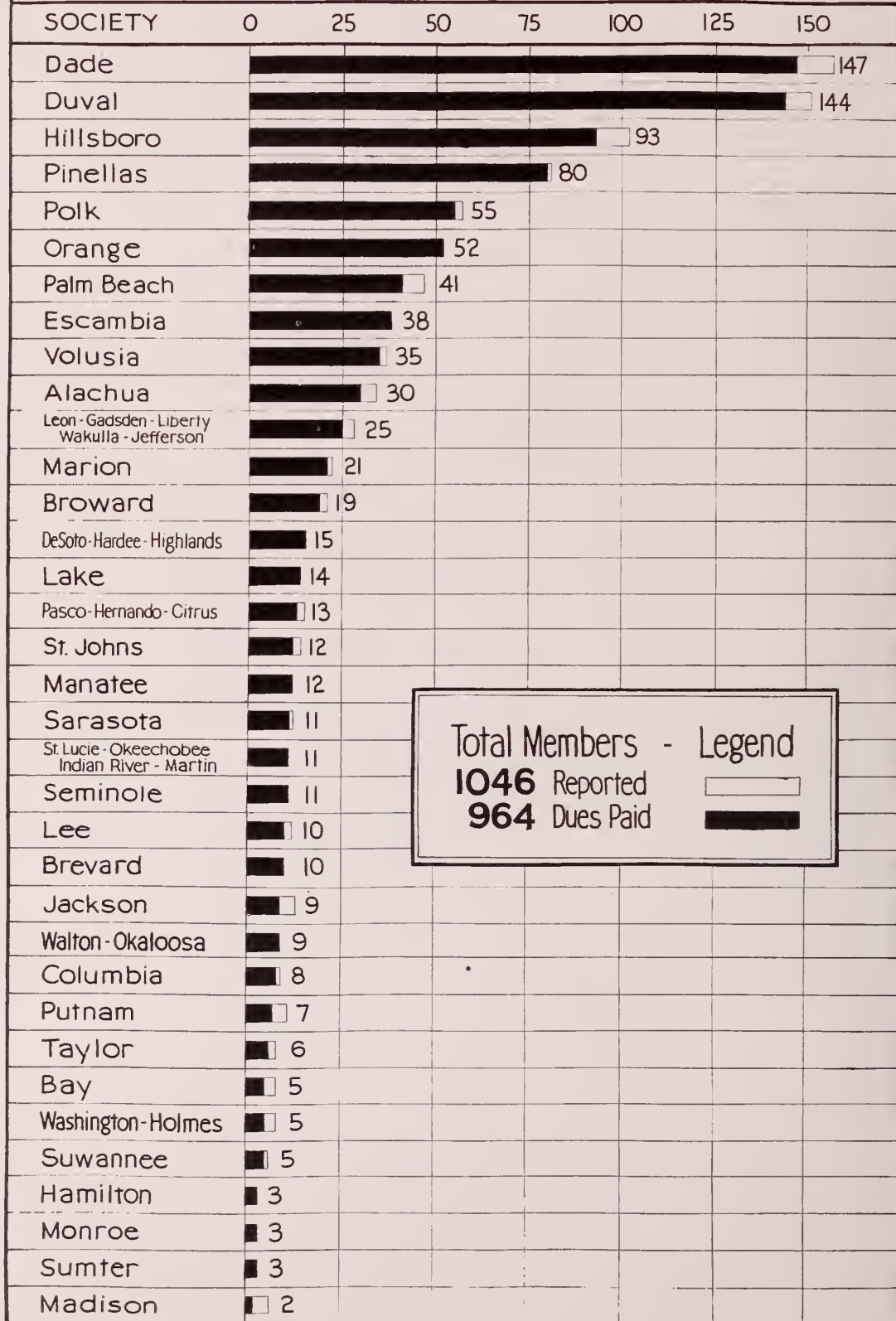
<i>Receipts</i>	
Cash in Bank, April 21, 1930.....	\$18,384.75
Dues Collected (Exhibit "D").....	\$ 7,790.00
Earnings from Advertising (Exhibit "E").....	3,597.17
Subscription and Miscellaneous sale of Journal.....	32.50
Bonus from Cooperative Medical Adv. Bureau.....	243.65
Interest on Savings Accounts.....	404.29
Earnings—Technical Exhibits (Exhibit "C").....	755.00— 12,822.61
Total Cash to be Accounted for.....	\$31,207.36
<i>Disbursements</i>	
General Fund Expenses (Exhibit "A").....	\$ 3,641.68
Journal Expenses (Exhibit "B")..	7,405.10
Technical Exhibit Expenses (Exhibit "C").....	\$128.68
To Entertaining Society....	453.00 581.68
Investment (Treasury Bonds)....	10,178.13
Furniture and Fixtures.....	43.53
Library.....	8.50— 21,858.62
Balance in Bank, April 20, 1931.....	\$ 9,348.74

EXHIBIT "A" CASH STATEMENT—GENERAL FUND April 22, 1930, through April 20, 1931.

<i>Receipts</i>	
Cash as per last audit.....	\$21,510.20
Back dues Collected (Exhibit "D").....	1,890.00
Current dues Collected (Exhibit "D").....	5,900.00— 7,790.00
Interest on Savings.....	404.29
Total Cash to be Accounted for.....	\$29,704.49
<i>Disbursements</i>	
Postage and Supplies.....	\$ 193.74
Telephone and Telegraph.....	96.73
Salaries.....	2,393.43

FLORIDA MEDICAL ASSOCIATION, INC.

Total Reported and Paid Members by Societies - 1930



Secretary-Treasurer	
Salary	600.00
Convention Expense	300.43
Auditing Expense	12.50
Bond of Treasurer	26.25
Incidental Expense	18.60—3,641.68
Furniture and Fixtures	43.53
Library	8.50
Investment (Treasury Bonds)	10,178.13
To Journal Fund (\$3.00 per member paid, 1929, 1930 and 1931 collections)	2,337.00— 16,208.84
Cash Balance	\$13,495.65

EXHIBIT "B"
CASH STATEMENT—JOURNAL FUND
April 22, 1930, through April 20, 1931.

Receipts

As per last audit (overdraft)	—\$ 3,342.19
Earnings from Advertising (Exhibit "E")	\$ 3,597.17
Subscription and Miscellaneous sale of Journal	32.50
Bonus from Cooperative Medical Adv. Bureau	243.65
From General Fund	2,337.00— 6,210.32
Total Cash to be Accounted for	\$ 2,868.13

Disbursements

Postage and Supplies	\$ 214.82
Telephone and Telegraph	76.67
Salaries	2,385.00
Editor's Salary	600.00

Printing of Journal and Electro-types	3,925.83
Auditing Expense	12.50
Convention Expense	121.11
Bond of Treasurer	26.25
Incidental Expense	42.83— 7,405.10
Balance—Overdraft	—\$ 4,536.97
Plus Balance General Fund	13,495.65
Plus Balance Exhibit Fund	390.05
Net Cash Balance in Bank	\$ 9,348.74

EXHIBIT "C"
CASH STATEMENT—EXHIBIT FUND
April 22, 1930, through April 20, 1931.

Receipts

Cash as per last audit	\$ 216.74
Earnings from Technical Exhibits	755.00
Total Cash to be Accounted for	\$ 971.74

Disbursements

Postage and Supplies	\$ 3.92
Telephone and Telegraph	10.36
Salaries	20.10
Convention Expense	46.65
Drawing, Printing, Sign Painting, etc.	47.65
To Entertaining Society (Escambia)	144.00
To Entertaining Society (Orange)	309.00— 581.68
Cash Balance	\$ 390.06

EXHIBIT "D"
DUES COLLECTED APRIL 22 1930, THROUGH APRIL 20, 1931

Name of Society	Total Members	No. Paid Members	No. in Arrears	1931 Dues Collected	Back Dues Collected
Alachua	30	21	9	\$ 200.00	.....
Bay	7	5	2	40.00	10.00
Brevard	9	6	3	50.00	10.00
Broward	18	18	0	170.00	40.00
Columbia	7	4	3	30.00	10.00
Dade	153	33	120	320.00	300.00
DeSoto-Hardee-Highlands	17	16	1	150.00	10.00
Duval	148	107	41	1,060.00	400.00
Escambia	38	22	16	210.00	130.00
Hamilton	3	0	3	.....	.....
Hillsboro	93	59	34	580.00	170.00
Individuals	5	2	3	10.00	.....
Jackson	12	12	0	110.00	.....
Lake	15	15	0	140.00	.....
Lee	10	9	1	80.00	.....
Leon-Gadsden-Liberty-Wakulla-Jefferson	29	23	6	220.00	20.00
Madison	3	2	1	10.00	10.00
Manatee	13	13	0	120.00	.....
Marion	22	11	11	90.00	40.00
Monroe	3	3	0	10.00	30.00
Orange	52	52	0	510.00	170.00
Palm Beach	41	29	12	280.00	120.00
Pasco-Hernando-Citrus	14	14	0	130.00	10.00
Pinellas	81	0	81	.....	230.00
Polk	56	52	4	510.00	50.00
Putnam	8	6	2	50.00	10.00
St. Johns	12	12	0	110.00	.....
St. Lucie-Okeechobee-Indian River-Martin	12	9	3	80.00	.....
Sarasota	12	12	0	110.00	20.00
Seminole	11	11	0	100.00	.....
Sumter	3	3	0	30.00	30.00
Suwannee* .....	..	..	..	.....	10.00
Taylor	7	7	0	60.00	.....
Volusia	34	27	7	260.00	60.00
Walton-Okaloosa	8	8	0	70.00	.....
Washington-Holmes	4	0	4	.....	.....
	990	623	367	\$5,900.00	\$1,890.00
				1,890.00	Back dues collected
				\$7,790.00	Total dues collected

*Society disbanded in 1931.

EXHIBIT "E"

EARNINGS FROM ADVERTISING

April 22, 1930, through April 20, 1931.

May, 1930	\$ 213.22
June	326.83
July	310.02
August	206.08
September	266.53
October	293.49
November	292.59
December	272.03
January, 1931	258.11
February	219.96
March	452.16
April	486.15
Total	\$3,597.17

EXHIBIT "F"

NAMES OF MEMBERS DROPPED BY REASON OF
REMOVAL, NON-PAYMENT OF DUES, ETC.

April 22, 1930, through April 20, 1931.

Name and Address	Dues Not Paid	
	1930	1931
ALACHUA COUNTY MEDICAL SOCIETY:		
Parks, W. B., Starke	\$10.00	\$10.00
Pridgeon, C. L., Waldo	10.00	10.00
Twiggs, J. H., Archer	10.00	10.00
Young, Wilburn C., Starke	10.00	10.00
BAY COUNTY MEDICAL SOCIETY:		
Bartee, L. H., Lynn Haven	10.00	*
McGeachy, J. S., Lynn Haven	10.00	....
Raborn, John D., Shamrock	10.00	....
BREVARD COUNTY MEDICAL SOCIETY:		
Counts, Noah T., Cocoa	10.00	....
Lowry, R. S. (deceased), Kingsville, O.	10.00	....
Stanford, John A., Ft. Lauderdale	10.00	....
COLUMBIA COUNTY MEDICAL SOCIETY:		
Dyer, J. H., Lake City	10.00	....
Farnell, P. C., Branford	10.00	10.00
Gable, J. D., Lake City	10.00	....
DADE COUNTY MEDICAL SOCIETY:		
Carter, A. C., Miami	10.00	....
Eckman, B. F., Homestead	10.00	....
Jeffrey, S. L., Miami	10.00	....
Kitchens, F. E., Coral Gables	10.00	....
Maxwell, E. B., Miami	10.00	....
Milton, J. D., Miami	10.00	....
Moore, Alfred, Kendall	10.00	....
Newell, C. E., Miami	10.00	....
Ryan, W. B., Jr., Miami	10.00	....
Shisler, J. W., Miami	10.00	....
DE SOTO-HARDEE-HIGHLANDS COUNTY MEDICAL SOCIETY:		
Witt, C. C., Arcadia	10.00	....
DUVAL COUNTY MEDICAL SOCIETY:		
Blinn, T. A., Jacksonville	10.00	....
Brewster, W. A., Callahan	10.00	....
Carradine, J. H., Orange Park	10.00	....
Enneis, F. B., Jacksonville	10.00	....
Faver, Robt. M., Lake Geneva	10.00	....
Fisher, L. C., Green Cove Springs	10.00	....
Henson, Graham, Jacksonville	10.00	....
Mitchell, J. W., (reported twice), Jacksonville	10.00	....
ESCAMBIA COUNTY MEDICAL SOCIETY:		
Mixon, J. A. (deceased), Pensacola	10.00	....
HILLSBORO COUNTY MEDICAL SOCIETY:		
Barker, F. K., Tampa	10.00	....
Carter, F. E., Tampa	10.00	....
Gale, John S., Tampa	10.00	....
Glass, Roscoe E., Tampa	10.00	....
Hampton, H. S., Tampa	10.00	....
Holloway, E. W., Tampa	10.00	....
Lake, E. T., Tampa	10.00	....
Rector, L. T., Montrose, S. D.	10.00	....
Snow, H. O., Tampa	10.00	....
Vaughan, Cecil, Tampa	10.00	....
JACKSON COUNTY MEDICAL SOCIETY:		
Finlay, D. H., Blountstown	10.00	10.00
Hodges, C. S., Marianna	10.00	*
McLeod, J. E. (deceased), Cypress	10.00	....
Marshburn, E. R., Marianna	10.00	*
Miller, R. L., Graceville	10.00	*
LAKE COUNTY MEDICAL SOCIETY:		
Toy, S. H., Umatilla .....	....	10.00
LEE COUNTY MEDICAL SOCIETY:		
Hunter, A. P., Ft. Myers	10.00	10.00
Seebold, J. L., LaBelle	10.00	....
LEON-GADSDEN-LIBERTY-WAKULLA-JEFFERSON COUNTY MEDICAL SOCIETY:		
Bertram, J. W., Greenwood	10.00	....
Gardner, O. W., Greensboro	10.00	*
Sapp, H. H., Havana	10.00	....
MADISON COUNTY MEDICAL SOCIETY:		
Blalock, A. L., Madison	10.00	....
Hamrick, B. F., Madison	10.00	....
Kinsey, J. P., Pinetta	10.00	....
McLeod, R. F., South Jacksonville	10.00	....
Yates, D. H., Madison	10.00	....
MANATEE COUNTY MEDICAL SOCIETY:		
Leffingwell, J. D. (deceased), Bradenton	10.00	....
MARION COUNTY MEDICAL SOCIETY:		
Clark, W. B., Ocala	10.00	....
MONROE COUNTY MEDICAL SOCIETY:		
Porter, J. Y., Key West	10.00	....
ORANGE COUNTY MEDICAL SOCIETY:		
Dodds, W. H., St. Cloud	10.00	*
Perkins, Herman (to Bay County), Panama City .....	....	10.00
PALM BEACH COUNTY MEDICAL SOCIETY:		
Bazemore, Mary Knott, Denver, Colo.	10.00	....
Buck, W. J., Belle Glade	10.00	10.00
Gardner, W. H., West Palm Beach	10.00	10.00
Rodrick, A. F., Beverly, Mass.	10.00	10.00
Rowe, A. L., Atlanta, Ga.	10.00	10.00
Van Landingham, W. E., West Palm Beach	10.00	10.00
Webb, Roy, Palm Beach	10.00	10.00
Wilber, A. B. (reported twice), Palm Beach	10.00	....
PASCO-HERNANDO-CITRUS COUNTY MEDICAL SOCIETY:		
Dame, L. H., Inverness	10.00	*
McLeod, Thos., Lacoochee	10.00	....
PINELLAS COUNTY MEDICAL SOCIETY:		
Pierce, L. H. (deceased), Kalamazoo, Michigan	10.00	....
Roope, A. P., Columbus, Ind.	10.00	....
POLK COUNTY MEDICAL SOCIETY:		
Tinkler, B. R., Lake Wales	10.00	*
Tomlinson, J. P., Sr., Lake Wales	10.00	*
PUTNAM COUNTY MEDICAL SOCIETY:		
Campbell, E. T., Welaka	10.00	10.00
Hosey, John T., Palatka	10.00	10.00
Main, D. C., Crescent City	10.00	*
Zeagler, G. M., Palatka	10.00	*
ST. JOHNS COUNTY MEDICAL SOCIETY:		
Guy, W. B., St. Augustine	10.00	....
Stevens, E. L., Illinois	10.00	....
SARASOTA COUNTY MEDICAL SOCIETY:		
Halton, Jack, Sarasota	10.00	*
TAYLOR COUNTY MEDICAL SOCIETY:		
Cline, D. E., Monticello	10.00	....
Culpepper, C. T. (deceased), Perry	10.00	....
O'Quinn, C. A., Perry	10.00	10.00
Weeks, J. L., Perry	10.00	*
VOLUSIA COUNTY MEDICAL SOCIETY:		
Carter, L. A., Bunnell	10.00	....
Glatzau, L. W. (joined Duval), Jacksonville .....	....	10.00
Williams, W. J., Seville	10.00	....
WASHINGTON-HOLMES COUNTY MEDICAL SOCIETY:		
Carter, G. W., Caryville	10.00	....
Martin, I. E. (joined DeSoto-Hardee-Highlands), Ft. Ogden	10.00	....
Miller, G. C., Chipley	10.00	....
Tiller, O. B., Chipley	10.00	....

Name and Address	Dues Not Paid	
	1930	1931
INDIVIDUALS:		
Bishop, J. W., Lake City.....	10.00	....
Hamner, Geo. P., Penney Farms.....	10.00	....
Keating, W. B., Miami.....	10.00	....
Middleton, W. E., Starke.....	10.00	....
Mills, D. A. (joined Pasco-Hernando-Citrus), Zephyrhills.....	10.00	....
Pintado, Nilo C., Tampa.....	10.00	....
Summitt, R. E., Shamrock.....	10.00	....
	<hr/>	<hr/>
	\$990.00	\$200.00
Dues of Secretaries.....	20.00	300.00
Dues of Honorary Members.....	40.00	20.00
	<hr/>	<hr/>
	1,050.00	\$520.00
		<hr/>
		1,050.00
	<hr/>	<hr/>
Total		\$1,570.00

*Reinstated—1931 dues paid.

ASSETS AND LIABILITIES

April 20, 1931.

Assets

Cash in Bank	\$ 4,010 88
General Fund—Accounts Receivable.....	3,670 00
Furniture and Fixtures (less depreciation)....	138.32
Library	90.50
Stationery Inventory	93.53
Notes Receivable	30.00
Savings—Barnett National Bank.....	5,337 86
Investment (Treasury Bonds).....	10,178.13

\$23,549.22

Liabilities

Journal Fund—Accounts Receivable.....	\$ 2.49
Capital Account	23,546.73

\$23,549.22

Dr. L. M. Anderson of Lake City moved that the joint report of the secretary-treasurer and business manager be accepted. Motion seconded and carried.

The report of the Executive Committee was then presented by Dr. L. M. Anderson, chairman.

REPORT OF EXECUTIVE COMMITTEE To the President and Members of the Florida Medical Association in Session at Orlando, Florida;

GENTLEMEN:

At the regular meeting of the House of Delegates, held on May 6, 1930, 5 p. m., at Pensacola, the Executive Committee was given three definite instructions by the House of Delegates: First, that it should continue the negotiations for group malpractice insurance instituted by the retiring Executive Committee; second, that it should invest \$10,000.00 of the Association's funds in bonds of the highest class as a trust fund for the Association; third, that it should institute a program for the medical education of the laity, as outlined in the address of Dr. Dozier, the retiring president, selecting as additional members of the Committee such members of the Association as it saw fit to assist in carrying out this work.

First: Group Insurance. A master policy has been secured with the United States Fidelity and Guaranty Company of Baltimore, Maryland. All members in good standing may obtain certificates based on the master policy. The Association's recognition of one reliable company will result in a material saving to individual members outside of large societies and also save substantially in local groups heretofore insured independently. Furthermore, a large number holding policies in one company should have a tendency to lower the rate or at least obviate an increase in the future. A recent report is to the effect that the U. S. F. & G. has at the present time three hundred and fifteen (315) policies in force in Florida. Of these, one hundred and fifty-five (155) are covered under county unit groups that will eventually come under the master policy. One hundred and sixty (160) doctors are actually covered under the master policy and of these, eighty-three (83) are new additions since the state group policy went into effect. The balance of seventy-seven (77) represents policies that were formerly covered under county unit policies.

Second: Trust Fund. United States Treasury bonds to the value of \$10,000.00 were purchased in the name of the Florida Medical Association and placed in the custody of the trust department of the Atlantic National Bank in Jacksonville. This in a definite way makes available resources of unquestionable security in the amount of \$10,000.00 for the Association.

Third: The program for medical education of the laity has been instituted as follows: The Executive Committee with the advice of President Davis selected the following gentlemen to act as an auxiliary committee in instituting a program for medical education of the laity: Dr. H. C. Dozier, Ocala; Dr. J. R. Wells, Daytona Beach; Dr. J. M. Irwin, St. Augustine; Dr. W. M. Rowlett, Tampa; Dr. R. O. Lyell, Miami, and Dr. Henry E. Palmer, Tallahassee. These gentlemen met with the Executive Committee on February 23rd at Jacksonville, and organized themselves into an auxiliary committee for this work. Dr. Dozier was elected the chairman of this sub-committee and Dr. J. R. Wells was elected the secretary. This sub-committee will render its own report to you on its proceedings up to date. We recommend that this Committee be appointed as a rotating five-year Committee, one new man to be appointed each year by the President on recommendation of this Committee.

At the first meeting of your Executive Com-

mittee, a working budget for the ensuing year was carefully audited and approved, and Dr. Stewart Thompson was reappointed as Business Manager for the Association.

After conferring with the Orange County Medical Society, May 12 and 13 were set by your Committee as official dates for the Fifty-Eighth Annual Meeting.

The new amendment to Article IV of the Constitution, providing for Honorary Members, etc., permits the Executive Committee to designate a special price for Honorary Members' subscriptions to the Journal, and your Committee authorized the Journal to be mailed to all Honorary Members, until further notice, without charge. Four Honorary Members were elected by the House of Delegates at the last annual meeting and the Journal of the Association has been mailed regularly to those honored by this special membership classification. However, two of the Honorary Members passed away before the end of the year.

At the time of the pre-convention meeting in Jacksonville last February, your Executive Committee met in regular session and Dr. T. S. Anderson of Live Oak was elected an Honorary Member.

Your Executive Committee has kept in close touch with the business affairs of the Association during the past year and has passed on transactions whenever called upon by the officers or business manager. The books and accounts of the Association were duly audited by Ford, Fisher, Boyd & Colley, certified public accountants, as of April 20th of this year.

Respectfully submitted,

L. M. ANDERSON, M.D.,
Chairman;
M. A. LISCHKOFF, M.D.,
GERRY R. HOLDEN, M.D.,
Committee.

At the close of the report Dr. Anderson stated that he wanted to especially thank Drs. Holden and Lischkoff for their efficient work in combatting malpractice in the State.

Motion duly made, seconded and carried that the report of the Executive Committee be received and adopted.

Dr. L. M. Anderson, chairman of the Executive Committee, requested Dr. Wells to give the official report of the Public Relations Committee, a sub-committee of the Executive Committee.

The following report was read by Dr. Wells:

REPORT OF THE PUBLIC RELATIONS COMMITTEE

(A sub-committee of the Executive Committee of the Florida Medical Association)

Object: To promote public health and to educate the general public to the value of scientific medicine.

A meeting was held in Jacksonville, February 23rd, in conjunction with the Executive Committee. Plans of organization and procedure were completed, as follows: It was proposed to divide the work of this Committee into several sections, the following being definitely decided upon:

1. Public Speakers' Bureau. To provide speakers for public gatherings as Service Clubs, Women's Clubs, Parent-Teachers' Associations, etc., by invitation.

2. Radio Section Bureau. It is the purpose of the Committee to provide from twenty to fifty radio talks to be delivered by selected speakers over the various radio stations throughout the State under the caption of the Florida Medical Association Program, the name of the speaker not appearing in the talk at any time. It is thought from information received that it will not be difficult to secure cooperation of the various radio stations without cost to the Association.

3. Motion Picture Bureau, to provide or show the means to secure proper motion pictures to use both in educating the physician and the lay groups. In case of a lay group, it is intended to accomplish by these moving pictures a greater appreciation of the value of scientific medicine to the individual and the general public.

4. Public Press Bureau. The object of this section is to provide articles arranged in logical sequence to appear in the public press at stated intervals. These articles will be published over the name of the Florida Medical Association, no individual names to appear. These articles will be available to any county medical society in the State upon application, to be published in their local paper over the name of the Florida Medical Association. This makes it unnecessary for groups of doctors to publish press articles from any other agency as has been done in the past.

Other sections covering the aspects of this committee will be added from time to time as the necessity demands.

Information obtained from the American Medical Association, American College of Surgeons and various state medical associations indicate

that the work has already been well started in the various sections of the country. By personal contact with Dr. Dodson, director of the Lay Education department of the American Medical Association, and Dr. Blachly, head of the Bureau of Child Hygiene and Public Health Nursing of the State of Florida, and Dr. Henry Hanson, State Health Officer, assistance, advice, cooperation and approval have been secured.

Six firms dealing in medical education motion picture films have expressed their cooperative inclinations with little or no expense. The State of Illinois Medical Association has been carrying on this work for some time and has reached a point of perfection truly astounding. All of its work and plans have been gladly forwarded to us. Its department has several salaried workers. Various other States are well into this field and will aid us. The public seems to be glad to learn of our proposed work and it will not be difficult to secure audiences.

It is very evident, in visualizing the plans of this Committee as outlined above, that its work will be voluminous, hard and far-reaching and is going to require the cooperation, ability and talent of every member of this Association. It is the purpose of this Committee to call upon at least forty or fifty additional members of the Association to give freely of their talent and ability in carrying out this work which is probably the most important ever undertaken by the organization. We expect it to be far-reaching in its effects, in curbing the rapid advance of socialistic medicine and also in minimizing the influence of various cults on a present unsuspecting and medically uneducated public.

Motion made, seconded and carried to accept Dr. Wells' report.

The following report of the Committee on Legislation and Public Policy was read by Dr. W. M. Rowlett of Tampa, chairman:

REPORT OF COMMITTEE ON LEGISLATION AND PUBLIC POLICY

Your Committee, after several conferences with prominent legislators and members of the Florida Medical Association, on account of the chaotic condition of the political situation, and certain information gathered relative to the activities of the cults, decided that we could accomplish more by taking a defensive stand.

Furthermore, your Committee, after carefully studying the proposed Basic Science law which

was recommended by the Legislative Committee of 1929, came to the conclusion that it not only lacked sufficient power to control the cults, but its enactment would mean an acknowledgment by the medical profession of a long bitter foe to organized medicine, and our national and state health organizations. We find also, that other states have been very slow in accepting this method of controlling the cults and for the last two years no additional states have adopted this law. The five states which have the Basic Science law do not seem to be very enthusiastic over their progress.

We have given considerable thought to the question of having a law that would create a department of professional and vocational standards. Lack of time, however, has prevented us from making a complete analysis of such a law. We recommend its consideration to the incoming administration.

By not attempting to pass any bills of our own at this session of the Legislature we have not placed our Legislative friends in a trading position and this leaves our field enviable for effective work to come.

To date, there have been introduced the following bills:

H. 158—Regulating practice of chiropractors.

H. 113—Regulating barbers.

A bill to enlarge the field of activity of the Naturopaths.

S. 1—Proposes to provide compensation to employees injured in industrial accidents. Employers are to be given the right to select physicians or surgeons to render the medical treatment except that "when the treatment required is not surgical, the injured employee shall have the right to choose any mode of treatment lawfully practiced in Florida."

S. 13—Relates to production, sale and dispensation and other traffic in narcotic drugs.

S. 23—Proposes that no tax to engage in any occupation or profession shall be levied against or from any natural person.

S. 43—Prescribes terms of license or certificate of registration issued to practitioners of barbering.

S. 52—Provides examination and certificates for pharmacists.

S. 64—Regulating practice of hair dressing.

S. 68—Permits retired army, navy and public health officers to practice medicine and surgery in Florida.

S. 70—Regulates the practice of dentistry.

S. 115—Provides for compensation in lunacy cases.

H. 42—As to compensation in lunacy trials.

H. 77—Relative to practice of hair dressing.

Through established contact in Tallahassee, we have been able to receive copies of most of these bills soon after they were introduced. After hastily analyzing them, we sent a synopsis with our opinion to the officials of the State Medical Association and to each county medical society, as follows:

I. House Bill No. 158, regulating the practice of Chiropractors. We believe this is a good bill and it would be beneficial, not only to the medical profession, but to the citizens of the state, if passed. This seems, also, to be the opinion of several prominent medical men of the state to whom I have talked, including the State Board of Health and officials of the Florida Medical Association.

II. The bill defining Naturopathy, providing for and regulating the practice of same. We think this a dangerous bill. It will be observed that they have done nothing to increase the educational requirements of the practice of Naturopathy, but that they wish to broaden their field to include the practice of practically everything in the healing art. Their present law permits them to use drugs that are the derivatives of plant life. Now, they wish to amend their act to include the spiritual, mental, mechanical, dietetic and biochemistry part of science. Should this bill pass it would mean "letting down the bars" to the most inefficient type of medical practice. We recommend that the Association use its influence to defeat this bill.

III. Senate Bill No. 68, permitting retired army, navy, and public health officers to practice medicine and surgery in Florida without an examination, we also consider a very dangerous one. In addition to our duty to the members of organized medicine, we owe a duty to those citizens who are not far-sighted enough to cipher medical problems for themselves and should this bill pass there will be dozens of physicians, retired on pensions, but desirous of adding a little more to their stock of worldly goods, and spending the winters in Florida, who will take advantage of this law to practice in those small tourist centers where the "year-round" physician finds it an almost impossible struggle through the dull season. We are satisfied that every tourist hotel in

the state will have these itinerant physicians, thereby eliminating the local physician who is justly entitled to this practice. We recommend also that the Association use its influence to defeat this obnoxious bill.

Senate Bill No. 13, regulating the production, sale and dispensation of narcotic drugs, differs very little from the Federal Narcotic law. Since sending out our report to the County Societies on the 29th, our attention has been called, by the Dade County Medical Society, to a clause wherein the amount of narcotic contained in the prescription must be written on the label. We believe that such a procedure would work to the disadvantage of both physician and patient. Thus, we recommend that this clause be omitted.

Senate Bill No. 115, providing compensation in lunacy cases. We find there is a division of opinion among the members of the Association, and would like instructions to determine our course regarding this bill.

Before proceeding further in this report, we wish to take this opportunity to thank Dr. J. H. Coffee, of the House of Representatives, Drs. J. M. Dell, J. W. Turner and W. C. Chowning, of the Senate, for aiding us in securing copies of bills and other desired information.

Dr. Stewart G. Thompson, our highly esteemed and efficient business manager, and our energetic and worthy president, Dr. J. C. Davis, have also rendered valuable service to our Committee by making frequent visits to the Capitol and rendering valuable information.

We find from the report of the State Board of Medical Examiners that during the last twelve months there were seventy-one (71) physicians licensed to practice medicine and surgery, eight applicants having failed on their examination. Nine applicants were turned down on account of the applicant either having graduated from a low grade college, or having been convicted of a crime involving moral turpitude. There were six revocations of licenses; one physician was placed on probation, and two convictions were secured in the state courts for the practice of medicine without a license. The last named cases were made possible through information furnished the Board of Medical Examiners by the State Board of Health's annual registration department.

As to public policies, we caution the members of our State Association and county societies to be alert to the expanding and rapid changes to

which present day medical opinion is subjected. The public is rapidly becoming health conscious and there is a feeling that our traditional ethics must undergo some readjusting.

The economic aspect of medical service seems to be the greatest disturbing factor. Industrial and state medicine is rapidly forcing the general practitioner out of the field. Twenty-three leading countries have already adopted compulsory medical insurance. State medicine is giving Germany and England the worst medical service in a civilized country, yet still other countries are desirous of trying it. In this country, it is not the laymen but the propaganda of the demagogues within our own ranks of which we must take heed. Woe be unto our Esaus who are clamoring for industrial and governmental positions.

We believe that organized medicine should take cognizance of the plight of the country physician. We find that during the past ten years the number of rural doctors has decreased thirty per cent and we fear that unless something is done to encourage these practitioners, the farmer will be left without proper medical protection, which would prove very detrimental to one of our greatest industries.

We recommend that the Association investigate the practice of "Expert Testimony." We find, in the last few years, the lay press, judges and lawyers have been very vehement in criticising expert testimony given by members of the medical profession. They allege that a defendant can get any kind of medical testimony he is able to pay for. This is a very serious charge that reflects upon the dignity of our time-honored profession, and we believe something should be done to correct such practice.

Respectfully submitted,

W. M. ROWLETT, Chairman;

H. E. PALMER,

H. C. DOZIER.

It was moved, seconded and carried that the report of Dr. Rowlett be accepted.

The report of the Committee on Medical Education and Hospitals was presented by Dr. J. S. Helms of Tampa, due to the absence of Dr. J. E. Boyd, of Jacksonville, chairman, as follows:

REPORT OF MEDICAL EDUCATION AND HOSPITAL COMMITTEE

There has been no change in the hospital situation in the State during the past year as far as standardization is concerned. Your Committee

feels that the general financial depression is more or less responsible for this condition of affairs.

Several hospitals have been built and opened their doors for the treatment of patients, but none of them have sought standardization. Your Committee is assured of the accuracy of that statement because of the intimate contact that has been established between the members of your Committee and the members of the Council on Medical Education and Hospitals of the American Medical Association, as well as the members of the Hospital Committee of the American College of Surgeons. Individual members, as well as the Committee body, have frequently served both Associations, until now there exists the most cordial and trustworthy relationship. It is our feeling that this is one of the outstanding accomplishments of the Committee.

During the past year, one of the most progressive moves, as far as specialized hospitals and medical education are concerned, was the completion of a modern, fireproof building, in Jacksonville, with up-to-date equipment and a capacity of sixty-five to seventy-five beds, devoted entirely to the treatment of negroes. The owners have promised to operate this hospital in accordance with the *fully approved* demands of the American College of Surgeons. In connection with the launching of this hospital, a campaign of education for the colored physicians has been planned whereby an experienced and highly qualified white specialist has agreed to teach at least one negro physician enough about his particular specialty to enable that negro doctor to do average good work in that particular branch of the profession. These teaching units comprise the subjects of Internal Medicine and Diagnosis; Surgery; Obstetrics; Orthopedics; Urology; Eye; Ear, Nose and Throat; Anesthesia. If this undertaking is carried to a successful accomplishment, the negro population will then have a fairly well balanced profession among their own race. The hospital will be used as a means to accomplish the educational end desired. This situation, so far as we know, is not duplicated anywhere else in the south unless it is in New Orleans, and even there the educational program outlined in this report is not being carried on. As an example of the sincerity of the effort that is being made: A young colored woman, with the necessary education, was carefully selected by the heads of the two departments and has been, for the past six months, preparing herself in both laboratory and X-ray tech-

nical work under the direct instruction of the technicians at the Duval County Hospital and her course of work has been both outlined and supervised by Dr. C. E. Royce, Bacteriologist and Pathologist, and Dr. W. M. Shaw, Roentgenologist, in order that these departments in the new hospital could be operated at a standard of efficiency, which would be satisfactory to both Dr. Royce and Dr. Shaw who are responsible for this service in the new hospital.

The list of standardized hospitals was not published in the April issue of our State Journal owing to the illness of our chairman, who has all the records of the Committee in his possession. However, they will be published later so that the rule may be complied with.

The members of this Committee wish to assure the Association of their continued approval of the new method, adopted two years ago, of making the appointments on this important committee. The records and all correspondence is kept in a file ready to transmit to the incoming chairman. All of which is respectfully submitted.

JOHN E. BOYD, Chairman;

JOHN S. HELMS,

R. O. LYELL.

On motion duly made, seconded and carried, the above report was adopted.

This being the final order of business, on motion made, seconded and carried, the meeting adjourned.

SCIENTIFIC ASSEMBLY

At 2 p. m. May 12th, the Scientific Assembly convened, with Dr. J. Q. Folmar of the Scientific Program Committee in the Chair.

At the request of the President, Dr. J. C. Davis, the privileges of the floor were accorded Dr. Lopez-Silvero representing the Medical Societies of Cuba, who spoke a few words of appreciation.

The following scientific papers were then read and discussed:

"A Clinical Consideration of Intravenous Urography-Uroselectan," Louis Orr, Orlando.

"Conservative Renal Surgery," Roy J. Holmes and Milton M. Coplan, Miami.

"The Post-operative Intestinal Ileus," J. Ralston Wells, Daytona Beach.

"Head Injuries," Harold D. Van Schaick, Jacksonville.

"Roentgen Diagnosis in Bone Lesions," W. M. Shaw, Jacksonville.

"Manual Rotation of Entire Fetus in Occiput Posterior Positions as Substitute for Forceps Rotation," M. C. Wilson, Miami.

"Importance of Focal Infection as a Cause of Disease," J. E. Gammon, Jacksonville. (Read by title only).

MEETING OF THE HOUSE OF DELEGATES

The meeting of the House of Delegates was called to order at 5 p. m. May 13th, by Dr. J. C. Davis, president.

The delegates elected by the various county societies were then called with instructions that if the delegates were not present, the alternates, if present, should be seated. The roll call of the secretary showed the following delegates, alternates or substitutes present:

DELEGATES

ALACHUA COUNTY MEDICAL SOCIETY—

I. A. Dailey

BREVARD COUNTY MEDICAL SOCIETY—

I. M. Hay

BROWARD COUNTY MEDICAL SOCIETY—

H. J. Peavy

COLUMBIA COUNTY MEDICAL SOCIETY—

L. M. Anderson

DADE COUNTY MEDICAL SOCIETY—

R. C. Woodard

C. E. Dunaway

Homer L. Pearson

W. C. Jones

DE SOTO-HARDEE-HIGHLANDS COUNTY MEDICAL SOCIETY—

J. A. Simmons

DUVAL COUNTY MEDICAL SOCIETY—

Gerry R. Holden

E. W. Veal

Louie Limbaugh

H. Marshall Taylor

W. M. Shaw

W. W. Kirk

ESCAMBIA COUNTY MEDICAL SOCIETY—

M. A. Lischkoff

HILLSBORO COUNTY MEDICAL SOCIETY—

W. C. Blake

J. E. Helms

B. W. Lowry

JACKSON COUNTY MEDICAL SOCIETY—

D. A. McKinnon

LEE COUNTY MEDICAL SOCIETY—

H. Quillian Jones

LEON-GADSDEN-LIBERTY-WAKULLA-JEFFERSON

COUNTY MEDICAL SOCIETY—

Henry E. Palmer

MANATEE COUNTY MEDICAL SOCIETY—

T. M. McDuffee

MARION COUNTY MEDICAL SOCIETY—

H. C. Dozier

ORANGE COUNTY MEDICAL SOCIETY—

C. D. Christ

G. H. Edwards

Wm. H. Spiers

PALM BEACH COUNTY MEDICAL SOCIETY—

F. K. Herpel

W. O. Arnold

PASCO-HERNANDO-CITRUS COUNTY MEDICAL SOCIETY—

A. C. Hamblin

PINELLAS COUNTY MEDICAL SOCIETY—

O. O. Feaster

J. A. Herring

Wm. G. Post

POLK COUNTY MEDICAL SOCIETY—

R. L. Cline

PUTNAM COUNTY MEDICAL SOCIETY—

D. C. Main

ST. JOHNS COUNTY MEDICAL SOCIETY—

Gordon Stanton

ST. LUCIE-OKEECHOBEE-INDIAN RIVER-MARTIN

COUNTY MEDICAL SOCIETY—

H. D. Clark

SARASOTA COUNTY MEDICAL SOCIETY—

Joseph Halton

SEMINOLE COUNTY MEDICAL SOCIETY—

G. S. Selman

SUMTER COUNTY MEDICAL SOCIETY—

S. C. Wood

VOLUSIA COUNTY MEDICAL SOCIETY—

J. Ralston Wells

M. J. Myres

Bay, Hamilton, Lake, Madison, Monroe, Taylor, Walton-Okaloosa, Washington-Holmes County Medical Societies were not represented.

Motion made, seconded and carried, that the delegate members from the county societies be seated in the absence of the elected delegates and alternates.

Motion made to dispense with the reading of minutes of last year's meetings, and to adopt the same as published in the May, 1930, issue of the Journal. Motion seconded and carried.

The president then called for nomination of delegates to the American Medical Association.

Dr. Bundy Allen of Tampa was nominated for regular delegate. Voted and carried.

Dr. Frederick K. Herpel of West Palm Beach was nominated alternating delegate to fill the two-year term, and Dr. C. D. Christ of Orlando was nominated alternating delegate to fill the one-year term. Voted and carried.

The next order of business was the selection of a meeting place for 1932.

Dr. Lopez-Silvero of Havana extended the sincere invitation of the different medical societies of Cuba, jointly and severally.

Dr. R. B. McIver of Jacksonville, representing the Duval County Medical Society, invited the Association to meet in Jacksonville.

Dr. Joseph Halton of Sarasota then extended a cordial invitation to come to Sarasota in 1932. An interesting supplement to this invitation, enthusiastically received, was a vocal selection to the tune of Mandalay, by Dr. Jack Halton.

Vote cast by ballot resulted in the selection of Sarasota for the 1932 meeting place of the Association.

The secretary made an announcement to the effect that Dr. R. A. Williams, representing the Abbott Laboratories of Chicago, was soliciting the doctors in direct competition with firms that had paid for exhibit spaces; also that Mr. H. B.

Heether of the Kelley-Koett Mfg. Company, was also soliciting and competing with firms that had paid for exhibit spaces. A motion was made, seconded and carried, directing that a letter be prepared and mailed to the firms employing these two representatives, giving information relative to the irregularities practiced by their representatives.

It was moved by Dr. J. S. Helms of Tampa that the House of Delegates extend a vote of sympathy and respect to the Medical Fraternities of Cuba in their fight for medical liberty. Motion amended by Dr. Anderson to include thanks for their kind invitation to this Association. Voted and carried.

The Chair then recognized Dr. Ralph N. Greene of Jacksonville, who spoke with reference to the bill introduced in the present Legislature which would tax all professional men an additional \$25.

Motion made, seconded and carried that the facts presented by Dr. Greene be handed to the Committee on Legislation and Public Policy, and that this Committee prepare a resolution in protest and send it at once to the Legislature.

It was moved, seconded and carried that as a token of esteem and appreciation, a rising vote of thanks be extended to Dr. L. M. Anderson of Lake City who, in the point of active service, was the oldest member of the Association present. Dr. Anderson responded with a few words of appreciation.

The Chair then recognized Dr. Henry Hanson, State Health Officer, who discussed legislation concerning the State Board of Health. Dr. H. Mason Smith, president of the State Board of Health, continued the discussion.

It was moved that the matter advocated by Drs. Hanson and Smith be formulated into a suitable resolution by these two gentlemen and presented to the Legislature. Motion seconded and carried. Following is the resolution drafted:

RESOLUTION PASSED BY THE FLORIDA STATE MEDICAL ASSOCIATION AT THE ANNUAL CONVENTION HELD IN ORLANDO, MAY 12, 1931.

Whereas, House Bill No. 371 is designed to abolish drug store inspection and State Board of Health licenses for pharmacists, and

Senate Bill No. 52 permitting physicians who have practiced ten years to be registered as pharmacists without examination, and

Whereas, the passage of these bills would abolish all supervision of the filling of prescriptions

and would permit untrained and unskillful people to compound prescriptions ordered by physicians, and

Whereas, the profession of pharmacy is one that requires much training and time to attain sufficient skill to compound these prescriptions, and

Whereas, in the opinion of the physicians composing the Florida State Medical Association, it would be extremely dangerous to the public to abolish this inspection and supervision

BE IT RESOLVED: That the Florida Medical Association in convention assembled at Orlando, May 12, 1931, goes on record as being opposed to House Bill No. 371 abolishing drug store inspection and Senate Bill No. 52 permitting physicians who have practiced ten years to be registered as pharmacists without examination;

BE IT FURTHER RESOLVED: That the copies of the above resolution be sent to the Speaker of the House of Representatives, and to the president of the Senate assembled at Tallahassee.

J. C. DAVIS, M.D., President,
Florida Medical Association.

SHALER RICHARDSON, M.D.,
Secy. Florida Medical Assn.

The privileges of the floor were then extended to Dr. Louie Limbaugh, of Jacksonville.

Dr. Limbaugh: "I want to bring to your attention a matter that has been of interest to a good many of us, in a sympathetic vein, the past couple of months since the negro physicians of Florida were up in Jacksonville, having been there through the activity of the State Board of Health for some post-graduate work. At that time in conversation with them they asked whether any manner of means could be worked out whereby they might be benefited, helped, elevated and aided in their work in the practice of medicine among their own kind and own race. They are not members of organized medicine and can not be down here because they are not members of our component societies and state association. It has been thought that perhaps some means might be at hand where some help could be given them.

We have in Jacksonville, the Brewster Hospital, a very well built hospital, relatively speaking, and an expensively built negro institution; but it cannot be recognized as an official hospital or approved by the American Hospital Association or the American College of Surgeons because the members of the Staff are not members of the American Medical Association.

It is thought by some of us that possibly some means could be worked out whereby a negro section of the Florida Medical Association could be made up and in turn negro sections in component county societies, perhaps meeting in a different place and at a different time than our section meets, and headed by one of their own race possibly designated as chairman of the negro section. This would enable them to be members of the American Medical Association and a component part of organized medicine. We have a lot that they need, and they have nothing that we need. They have approached us unofficially, but would like to be so organized. They have a state association, of course, but it cannot be recognized by the American Medical Association, or any body of organized medicine, so-called.

They were very frank in their conversation with us. They appreciate the situation, and all they are asking for is some help. After a good deal of discussion, pro and con, as to what might be done about it, it was decided that this motion be made before this House of Delegates; and it is hereby moved that a special committee be appointed by the president of the Florida Medical Association to investigate and report at the next annual meeting relative to the possibility of creating a negro section of the Florida Medical Association. It has also been suggested that this matter be brought up at the meeting of the Southern Medical Association for some universal discussion with representatives of other southern societies to see how they react and see what might be done along that line."

The above motion was seconded, discussed at length, and carried.

The President appointed Drs. Louie Limbaugh, John S. Helms and Gerry R. Holden to serve.

Dr. George E. Osgood of St. Petersburg and Dr. H. L. Simpson of Pensacola, were nominated for honorary membership in this Association.

It was moved, seconded and carried that the above named doctors be placed on the Honor Roll.

Dr. M. A. Lischkoff offered a suggestion as to a legal advisory committee with a lawyer as a member, but was overruled.

There being no further business, the meeting adjourned.

SCIENTIFIC ASSEMBLY

The second meeting of the Scientific Assembly convened at 9 a. m., May 13th. The following papers were read and discussed:

"The Enlarged State Board of Health Program,"

Henry Hanson, Jacksonville.

"Unusual Ulcerative Condition of the Chest Wall," J. Lee Kirby-Smith, Jacksonville.

"Observations on Appendicitis," John S. McEwan, Orlando.

"Duodenal Stenosis," John S. Helms, Tampa.

"Colonic Diverticuli in Relation to Carcinoma and Its Prevention," Rosalie Slaughter Morton, Winter Park.

"The Use of Free Fascia in the Repair of Hernias," Harry A. Peyton, Jacksonville.

THIRD GENERAL SESSION

The General Session of the Florida Medical Association again convened at 2 p. m., Wednesday, May 13th. The meeting was called to order by Dr. J. C. Davis of Quincy, president. The Chair announced that the first order of business would be the election of officers for the ensuing year.

Dr. G. H. Edwards of Orlando was nominated for president. Nomination seconded. It was then moved that the nomination be closed and the secretary be instructed to cast a ballot for Dr. Edwards. Motion seconded and carried.

Dr. J. C. Davis then requested Drs. F. Clifton Moor and H. C. Dozier to escort the newly elected president to the Chair.

Dr. Edwards: "Mr. President and members of the Florida Medical Association: I think one of the most embarrassing things which a person has to do is to sit and listen to words such as have been thrown on the air like rain by friends. Although you and I may know that most of these words, or many of them, bear the stigma of exaggeration, still it does give one a great sense of warmth and well-being, almost alcoholic in intensity, somewhere in this region (demonstrating). I believe all of you have felt that way, too, on some anniversary or birthday when you went downstairs and noted at your plate presents—tokens of respect, admiration or love—from members of the family, parents or children. And sometimes when you looked them over and noted the very gaudy kerchief and absolutely impossible tie presented by your admiring son you have wondered what in the devil you were going to do with it, but at the same time you made a resolution to submit to his intended purposes no matter how much embarrassment it might cause you. It has been said that no chain is stronger than its missing link. This link which I am now between

you and your Association I trust will not be missing nor found greatly wanting. I probably realize and know better than you my own limitations, and I realize some of the responsibilities of this office—that it is quite a task. I know that I cannot fill the Chair with the great tact and courtesy and grace of my many able predecessors, but I think that you all know that I will give of my time and of myself toward furthering the prestige of the Florida Medical Association insofar as I can. I will endeavor to so conduct myself and the affairs of this office, that at the end of the year you need have no apologies for having honored me with this office. I thank you."

The Chair then declared nominations for first vice-president in order.

Dr. A. M. C. Jobson of Tampa was nominated for first vice-president.

It was moved, seconded and carried that the nominations be closed and the secretary cast a ballot for first vice-president.

Dr. J. Q. Folmar of Chattahoochee was nominated second vice-president.

It was moved, seconded and carried that the nominations be closed and the secretary cast a ballot for the second vice-president.

Dr. Joseph Halton of Sarasota was nominated third vice-president.

It was moved, seconded and carried that the nominations be closed and the secretary cast a ballot for the third vice-president.

It was moved that the president be instructed to cast a ballot for Dr. Shaler Richardson of Jacksonville as secretary-treasurer of the Association. Motion duly seconded and carried.

Dr. Richardson: "Mr. President and Members of the Association: I do want to tell you how much I appreciate the honor of being your secretary and treasurer, and most of all how much I appreciate the cooperation of all the members throughout the State in carrying on our work. The various county societies have been so co-operative with our office that it makes the task we have a most pleasant one. I want to say this, too, that we are trying to operate our Journal so that you will feel proud of it, and we want suggestions and criticisms from you, and we would like to have them made direct to our office so that we can carry on the work according to your wishes."

Dr. F. Clifton Moor was then appointed by Dr. Edwards to present the past president's emblem to the retiring president, Dr. J. C. Davis.

Dr. Moor: "Mr. President and fellow members of the Florida Medical Association: Having been a personal friend and intimate acquaintance of Dr. Davis for many years, it gives me extreme pleasure to present this button to him as past president of this Association. I perhaps have had the pleasure of knowing Dr. Davis longer than most members of the Association. Last year at Pensacola when he was elected, the members of his home county society knew that we were putting a man in office who had already demonstrated in his local society that he could fill the bill. He has been active in that society work for many, many years, and has taken upon himself many burdens for the State Association. It is therefore a distinct honor to present to Dr. Davis the emblem of the past presidents of this Association."

Dr. L. M. Anderson, chairman of the Executive Committee, announced that Pasco and Hernando counties had been transferred from the Thirteenth to the Fifth Councilor District.

Dr. Herrman H. Harris of Jacksonville: "On behalf of the Association I wish to thank the Orange County Medical Society for their wonderful reception during our stay in Orlando. I have had occasion to attend three conventions in Orlando, and I have always been glad that we have chosen this city for our meeting. Its beautiful lake-dotted surroundings, its central position in the State, and its most hospitable people make it a wonderful choice for a meeting place. I am sure that every one who attended this convention will go home with deep gratitude and appreciation for all the kindnesses and courtesies shown to them by the Orange County Medical Society, and by the people of this City."

Dr. Edwards: "We, of the Orange County Medical Society, appreciate these words of Dr. Harris."

Upon motion, duly seconded and carried, the meeting adjourned, sine die.

SCIENTIFIC ASSEMBLY

The third meeting of the Scientific Assembly convened at 2 p. m., May 13th. The following papers were read and discussed:

"Sympathetic Neurotomy for Endocrine Insufficiency," Carleton Deederer, Miami.

"Otic Mold Infection," L. C. Ingram, Orlando.

"The Present Status of the Injection Treatment of Hemorrhoids," Leigh F. Robinson, Ft. Lauderdale.

"Sterility with Particular Reference to Its Cause, Diagnosis and Treatment," Ferdinand Richards, Jacksonville.

"Use and Abuse of Irradiated Ergosterol," Warren Quillian, Coral Gables.

"Traumatic Meningitis," by Dr. Ralph N. Greene, Jacksonville. (Read by title only.)

"Tonsillectomies with a Review of 134 Cases," J. N. McLane, Pensacola.

"The Importance of the X-ray Examination of the Nasal Accessory Sinuses in Cases of Chronic Cough," J. C. Dickinson, Tampa.

"Results of Irrigation and Closure in Selected Cases of Non-pyogenic Arthritis," Prescott LeBreton, St. Petersburg.

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The total registration during the Fifty-Eighth Annual Meeting of the Florida Medical Association, held in Orlando, May 12th and 13th, was 502; members, 336; visitors, 30; Woman's Auxiliary, 136. (Pages 556, 558).

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FIFTEENTH DISTRICT—LEIGH F. ROBINSON, M.D., Ft. Lauderdale
Palm Beach, Broward.

SIXTEENTH DISTRICT—W. L. ASHTON, M.D. Umatilla
Sumter, Lake.

SEVENTEENTH DISTRICT—MEREDITH MALLORY, M.D. Orlando
Osceola, Orange.

EIGHTEENTH DISTRICT—T. M. McDUFFEE, M.D. Manatee
Manatee, Sarasota.

NINETEENTH DISTRICT—HENRY P. BEVIS, M.D. Arcadia
DeSoto, Hardee, Highlands.

TWENTIETH DISTRICT—WILLIAM R. WARREN, M.D. Key West
Monroe.

TWENTY-FIRST DISTRICT—H. D. CLARK, M.D. Ft. Pierce
St. Lucie, Okeechobee, Indian River, Martin.

OUR PRESIDENT

Gaston Holcombe Edwards was born in Granby, Connecticut, August 18th, 1875. He received his preliminary education on the farm, in the little red school house and in the high school of Hartford, Connecticut. He graduated from the Sheffield Scientific School of Yale University in 1897, received his Master's Degree from Yale in 1899 and his M.D. in 1902 from the Yale Medical School.

After two and a half years in hospitals in New

York City, there followed a year of travel in South America, six months of which were spent in Brazil studying tropical medicine and prospecting for rubber on the Amazon. He returned home to Connecticut, but after six months spent in private practice, the lure of the tropics called him to Panama, where he spent three and a half years in the Canal Zone, in Government Service as surgeon to the Commission.

Dr. Edwards came to Florida in November, 1909, with his wife and took up residence in Orlando. There are three children in the family. He has always been identified with organized medicine, as evidenced by his serving as president and for ten years secretary of the Orange County Medical Society; as president of the Florida Midland Medical Society and the Florida Railway Surgeons' Association. He is local surgeon of the Atlantic Coast Line at the present time. He is a member of the Southern Medical Association, the Southeastern Surgical Congress, Fellow of the A. M. A., attending gynecologist and obstetrician of the Orange General Hospital and consultant at the Orlando-Florida Sanitarium. His fraternities are Nu Sigma Nu and Sigma Xi. During the World War he served one and one-half years in the American Red Cross, first with Col. Ryan in Saloniki, Greece, and later as Deputy Commissioner of Red Cross activities in Servia with headquarters in Belgrade.

He has a broad interest in public affairs, is a past president of the Kiwanis Club, president of the Yale Club of Central Florida for the past five years, a member of the Orlando Utilities Commission for seven years and now its president.

The Buffalos, Hopping Fleas, Snarks and the Yellow Cat all claim him as a member.

THE ORLANDO MEETING

The fifty-eighth annual meeting of the Florida Medical Association, held in Orlando in conjunction with the twelfth annual meeting of the Florida Railway Surgeons' Association on May 11th, 12th and 13th, was in all respects a most successful one.

The central location and the wonderful network of hard-surfaced roads and railway service brought to Orlando, with one exception, the largest number that has ever been brought to any Association meeting.

A most attractive arrangement in the lobby and on the mezzanine floor in the San Juan Hotel gave the exhibitors an unusual opportunity for display.

The scientific program committee selected a great number of unusually interesting papers, the presentation of which was very much aided by the microphone and amplifiers which had been installed in the convention hall.

The unusually large number of women attending gave to the banquet a more festive spirit than ordinarily. Selection of the speakers were most happy. The Orange County Society presented to the Association at the banquet the Orlando Cup, which will be played for by the golfer's association each year until the fortunate one wins it for three successive years.

The doctor's Lounge, a place for relaxation and where the doctors might uninterruptedly recall first meetings and meet new friends, was well patronized and a most agreeable sense of relaxation was enjoyed by all who entered its doors. The sign which Dante describes, "Leave Hope Behind, all ye, who enter here," was not over the door. The doctors' pantomime of Queen Elizabeth's Court in 1601 was the high light in entertainment of the Association and the thespian art displayed by those who took part was of a superlative quality.

This is the third time in seventeen years that Orlando has been favored by the presence of the State Medical Association meeting and there seemed to be a pervading sense that this was the most successful of the three. The cordial responses to suggestions made and the many words of appreciation which have been received should make the Orange County Society feel amply repaid for all efforts put forth to make our visit with them pleasing.

APPROVED HOSPITALS IN FLORIDA

Compliance with the minimum requirements for standardized hospitals in the state, as recommended by the Hospital and Medical Education Committee, enables a hospital to appear on the approved list of the Association. It is anticipated that this list will be published annually in the Journal of the Association. Any hospital that is approved by the American College of Surgeons will be automatically included in this approved list. There have been practically no changes in the following list which was published last year:

APPROVED HOSPITALS OF THE FLORIDA MEDICAL ASSOCIATION, APRIL 1, 1931.

HOSPITAL	CITY	SUPERINTENDENT	BED CAPACITY	RATING
1. Morton F. Plant Endowed	Clearwater	Hilda E. Hayes	35	Conditioned
2. Halifax District	Daytona Beach	Julia Luck	125	Fully Approved
3. DeLand Memorial	DeLand	Miss Hahn	32	Conditioned
4. Lauderdale General	Ft. Lauderdale	Mrs. A. Lawin	28	Conditioned
5. Alachua County	Gainesville	Annie Hessler	55	Fully Approved
6. Duval County	Jacksonville	Fred M. Walker	180	Fully Approved
7. Riverside	Jacksonville	Beatrice Leland	40	Fully Approved
8. St. Luke's	Jacksonville	J. H. Holcombe	175	Fully Approved
9. St. Vincent's	Jacksonville	Sr. Marguerite	210	Fully Approved
10. U. S. Marine	Key West	M. S. Lombard, M.D.	40	Fully Approved
11. U. S. Veterans'	Lake City	H. C. VonDahm	252	Fully Approved
12. Morrell Memorial	Lakeland	Walter Weed, M.D.	95	Fully Approved
13. Melbourne	Melbourne	I. M. Hay, M.D.	27	Conditioned
14. Dade County	Miami	J. A. Smith, M.D.	102	Conditioned
15. Jackson Memorial	Miami	A. J. McRae, M.D.	325	Fully Approved
16. Victoria	Miami	Mary E. Parish	68	Fully Approved
17. St. Francis	Miami Beach	Sr. M. Alice	100	Fully Approved
18. Munroe Memorial	Ocala	John A. Bowman	65	Fully Approved
19. Florida Sanatorium and Benevolent Association	Orlando	L. L. Andrews, M.D.	102	Fully Approved
20. Orange General	Orlando	Henry Yates	150	Conditioned
21. Pensacola	Pensacola	Sr. Alexine	115	Fully Approved
22. U. S. Naval	Pensacola	Capt. Jno. F. Murphy	190	Fully Approved
23. East Coast	St. Augustine	V. A. Lockwood, M.D.	100	Fully Approved
24. Flagler	St. Augustine	C. O. Stimmel	85	Fully Approved
25. City Hospitals (Mound Park-Mercy)	St. Petersburg	C. S. Myers	89	Fully Approved
26. Faith	St. Petersburg	W. C. McConnell, M.D.	50	Fully Approved
27. Sarasota City	Sarasota	Miss Nina F. Self	65	Conditioned
28. Florida Agricultural and Mechanical College	Tallahassee	L. H. B. Foote, M.D.	25	Conditioned
29. Children's	Tampa	Olive Rogan	30	Fully Approved
30. Tampa Municipal	Tampa	Sheldon Stringer, M.D.	225	Fully Approved
31. Good Samaritan	West Palm Beach	W. L. Shackelford, M.D.	125	Fully Approved

LEGAL OPINION—GROUP INSURANCE

The State Association is to be congratulated in that already 315 members, or over one-third of the entire membership, have availed themselves of the opportunity to secure malpractice liability insurance under the group policy made available last fall to members of the Association. Considering the few months that this policy has been in force, this result seems very gratifying.

Some questions have been raised about the protection offered by this policy. Final arrangements were made with the United States Fidelity and Guaranty Company only after thorough investigation and careful study. We believe that this policy offers as broad a coverage and as good protection as can be offered by any insurance contract.

Mr. Lyman M. Beckes, of Orlando, an attorney with wide experience in insurance matters, after a careful examination of our policy, writes as follows about it:

"I have had occasions to construe policies covering physicians, surgeons, and hospitals on numerous occasions heretofore and believe that the group form professional liability policy which I have just examined is about as broad a coverage as it has been my lot to examine."

In answer to another question which has been raised regarding group insurance in general, Mr. Beckes also states:

"I examined the policy with the purpose in mind of determining whether by the terms of the policy one member of the Florida Medical Association could be estopped from testifying for or against another member of the Association. I find there is nothing whatsoever in the policy that will in any way bind a member of the Association to testify on behalf of a fellow member or prevent him from doing so."

Should any members of the Association have any doubts about the protection offered by the policy or any questions concerning its provisions, the Executive Committee would consider it a favor if they would communicate with any member of the Committee or with the Business Manager.

Advertisers in our Journal and Exhibitors at our Annual Conventions bear the stamp of approval both of the American Medical Association and this Association and should receive preference when placing orders for equipment and supplies.

STATE NEWS ITEMS

The United States Civil Service Commission has announced that a vacancy exists in the position of physician qualified in tuberculosis in the Regional Office of the United States Veterans' Administration at Dallas, Texas. A man is desired for the appointment. The entrance salary is \$3,800 a year. Higher-salaried positions are filled through promotion. Full information may be obtained from the United States Civil Service Commission, Washington, D. C.

* * *

Dr. and Mrs. R. C. Hubbard of Tampa are the proud parents of twin girls, Caroline and Margaret, born April 15th.

* * *

Dr. H. W. Counts of Jacksonville announces removal of his office to 312-314 Peninsular Casualty Building. Dr. Counts was previously in the Professional Building.

* * *

Dr. L. T. Furlow of Brooksville entertained the Pasco-Hernando-Citrus County Medical Society at its May meeting. Dr. George A. Dame of Inverness, the society's delegate to the annual convention, gave an interesting report of the meetings held in Orlando. Dr. T. E. Jackson, Dade City, made a report of the meeting of the Florida Hospital Association which was held in conjunction with the state convention. Dr. G. R. Creekmore, Brooksville, discussed the physician's malpractice insurance policy held by the state association. On motion, the following resolution was passed:

"In reference Senate Bill No. 13 in relation to dispensing and prescribing narcotics:

First, we do not object to the bill as required by the U. S. Narcotic Bill.

Second: But we do object to the portion of bill requiring the druggist in filling prescriptions to put the name and amount of narcotic on said label as this would be detrimental to the confidential relation of physician to patient."

Dr. A. B. Cannon of Lacoochee will entertain the society at its June meeting.

* * *

The Central Florida Medical Society held its semi-annual meeting in February at the Magnolia Hotel, Leesburg. A very interesting program was enjoyed by some forty-four who were in attendance. The address of welcome was extended by Senator T. G. Futch of Leesburg and responded to by Dr. H. C. Dozier of Ocala. The

scientific program consisted of a paper on "Endocervicitis" by Dr. W. M. Rowlett of Tampa, discussed by Dr. W. C. Thomas of Gainesville; a paper on "Perforating Gastric and Duodenal Ulcers" by Dr. F. G. Peek of Ocala, discussed by Dr. G. A. Dame of Inverness, and a paper on "Inadequacy of Hospitalization Facilities" by Dr. L. S. Laffitte of Gulf Hammock. Dinner was served at 7:30 p. m. and the following persons were in attendance: Dr. J. L. Chalker, president, Ocala; Dr. M. H. DePass, vice-president, Gainesville; Dr. J. N. Moore, vice-president, Ocala; Dr. H. S. Cherry, vice-president, and Mrs. Cherry, Center Hill; Dr. John E. Maines, Jr., secretary-treasurer, Gainesville; Dr. A. B. Allbritton, Wildwood; Dr. Edwin H. Andrews, Gainesville; Dr. W. L. Ashton, Umatilla; Mr. J. H. Bowman, Supt. Hospital, Ocala; Dr. I. A. Dailey, Gainesville; Dr. and Mrs. H. C. Dozier, Ocala; Dr. G. H. Edwards, Orlando; Dr. Albert H. Freeman, Ocala; Senator T. G. Futch, Leesburg; Dr. R. N. Greene, Jacksonville; Dr. M. M. Hannum, Eustis; Dr. H. G. Holland, Leesburg; Dr. T. Byron King, Gainesville; Dr. L. S. Laffitte, Gulf Hammock; Dr. W. K. Lane, Ocala; Dr. F. G. Lindner, Ocala; Dr. E. B. Milam, Jacksonville; Dr. H. K. Morrison, Leesburg; Dr. Eugene G. Peek, Ocala; Dr. S. D. Rice, Gainesville; Dr. William M. Rowlett, Tampa; Dr. and Mrs. D. T. Smith, Gainesville; Dr. T. A. Snow, Gainesville; Dr. W. H. Spiers, Orlando; Dr. and Mrs. J. L. Strange, McIntosh; Dr. and Mrs. B. B. Templeton, Leesburg; Dr. Stewart Thompson, Jacksonville; Dr. and Mrs. G. C. Tillman, Gainesville; Dr. T. H. Wallis, Ocala; Dr. W. Walsh, Gainesville; Dr. C. D. Whitaker, Raiford; Dr. and Mrs. S. C. Wood, Leesburg.

* * *

Dr. and Mrs. John Calvert Holley of Milton announce the birth of a son, John Calvert Holley, Jr., on January 20, 1931, at Pensacola.

* * *

The Thirty-Second Annual Meeting of the American Proctologic Society will be held in Philadelphia, June 7-9. Ethical practitioners are invited to participate in the events of the second and third days of the meeting.

* * *

Dr. J. W. Hodges, a member of the Duval County Medical Society, is now at 126 Hanover Street, Hampton, Virginia. Dr. Hodges' previous address was U. S. Veterans' Bureau, Hines, Illinois. (Continued on page 548)

COUNTY SOCIETY	SECRETARY	MEETINGS				Dues Paid.
		Date	Time	Place	Luncheon?	
Alachua	J. E. Maines, Jr., M.D., Gainesville.	2nd Tuesday	12:00 Noon	White House	Yes.	70%
Bay	D. M. Adams, M.D., Panama City.					71%
Brevard	I. K. Hicks, M.D., Melbourne.	3rd Tuesday		Varies		67%
Broward	Anna A. Darrow, M.D., Ft. Lauderdale.	2nd Tuesday	8:00 P.M.	Chamber of Com- merce	No.	100%
Columbia.....	T. H. Bates, M.D., Lake City.	1st Monday.	7:30 P.M.	Blanche Hotel		57%
Dade	Jos. S. Stewart, Jr., M.D., Miami.	1st Friday	8:30 P.M.	Club Room, Huntington Bldg.	Occasionally.	22%
DeSoto-Hardee- Highlands ...	L. W. Martin, M.D., Sebring.		8:00 P.M.	Varies	Yes.	94%
Duval	Kenneth A. Morris, M.D., Jacksonville.	1st Tuesday	8:15 P.M.	Chamber of Com- merce Building	No.	72%
Escambia	J. M. Hoffman, M.D., Pensacola.	1st Tuesday	8:00 P.M.	Board of Health Building	No.	58%
Hamilton	J. R. Bruce, M.D., Jasper.					
Hillsboro	J. T. Cowart, M.D., Tampa.	1st and 3rd Tues- days	8:00 P.M.	Tampa Municipal Hospital	No.	63%
Jackson	T. H. Hudgens, M.D., Sneads.	2nd Tuesday	3:00 P.M.	Marianna	No.	100%
Lake	W. L. Ashton, M.D., Umatilla.	1st Thursday	12:30 P.M.	Eustis	Yes	100%
Lee	H. Quillian Jones, M.D., Ft. Myers.	3rd Friday	7:30 P.M.	Lee Memorial Hospital	No.	90%
Leon-Gadsden- Liberty- Wakulla- Jefferson	O. G. Kendrick, M.D., Tallahassee.	Quarterly	3:00 P.M.	Varies	Yes.	79%
Madison	Geo. O. Davis, M.D., Madison.					67%
Manatee	A. Q. English, M.D., Manatee.	1st and 3rd Tues. Oct. to May; 2nd Tues. May to Oct.	7:00 P.M.	Dixie Grande Hotel	Yes.	100%
Marion	Thos. H. Wallis, M.D., Ocala.	3rd Thursday	12:30 P.M.	Marion Hotel	Yes.	50%
Monroe	W. R. Warren, M.D., Key West.	1st Sunday	9:00 P.M.	Varies	Yes.	100%
Orange	J. R. Chappell, M.D., Orlando.	3rd Wednesday	8:30 P.M.	Varies	No.	100%
Palm Beach ..	Geo. M. Dawson, M.D., W. Palm Beach.	2nd Monday	8:00 P.M.	Court House	Yes.	71%
Pasco- Hernando- Citrus.....	Geo. R. Creekmore, M. D., Brooksville.	2nd Thursday	7:00 P.M.	Varies	Yes.	100%
Pinellas	O. O. Feaster, M.D., St. Petersburg.	Every other Friday	8:00 P.M.	500 Power & Light Bldg.	No.	
Polk	Heriman Watson, M.D., Lakeland.	2nd Wednesday in Feb., Apr., June, Aug., Oct., Dec.	1:00 P.M.	Lakeland	Yes.	93%
Putnam	E. W. Warren, M.D., Palatka.	2nd Thursday	7:00 P.M.	James Hotel, Palatka	Yes.	75%
St. Johns	Redding Britt, M.D., St. Augustine.	3rd Tuesday	8:30 P.M.	Varies	Yes.	100%
St. Lucie-Okeech- bee-Indian River-Martin ..	C. L. Davis, M.D., Okeechobee.	3rd Thursday	8:00 P.M.	Varies	Yes.	75%
Sarasota	F. C. Metzger, M.D., Sarasota.	2nd Tuesdav	8:30 P.M.	Varies	Occasionally.	100%
Seminole	J. T. Denton, M.D., Sanford.	2nd Friday	8:00 P.M.	City Hospital		100%
Sumter	W. E. Mitchell, M.D., Coleman.	2nd Tuesday		Varies	No.	100%
Taylor	Jas. L. Weeks, M.D., Perry.	Last Thursday	12:15 P.M.	Eldorado Cafe	Yes.	100%
Volusia	J. Ralston Wells, M.D., Daytona Beach.	2nd Tuesday	7:30 P.M.	Varies	Yes.	79%
Walton- Okaloosa	A. G. Williams, M.D., Lakewood.	3rd Thursday	8:00 P.M.	Varies	Occasionally.	100%
Washington- Holmes						

NOTE—Secretaries: Please submit information to complete the above schedule.

Dr. E. L. Huggins, formerly of Freeport, is now located at DeFuniak Springs. Dr. Huggins' office will be on Baldwin Avenue.

* * *

According to the Tampa Tribune, T. C. Whitehurst of 617 Marion Street was arrested March 26th by sheriff's deputy and lodged in the county jail on direct information filed by County Solicitor Skinner charging him with having performed an illegal operation. He already is under sentence on conviction in criminal court of practicing medicine without a license and is awaiting appeal to the Supreme Court. Federal court authorities also have a charge of use of the mails to defraud pending against him.

* * *

Dr. Carlton Deederer of Miami gave a series of lectures in the University of Miami recently on "Anatomy in Art."

* * *

Dr. and Mrs. Wieland Walker Rogers of Jacksonville announce the birth of a daughter, Patricia Darden Rogers, on February 2nd at Riverside Hospital.

* * *

The April meeting of the DeSoto-Hardee-Highlands County Medical Society was held at Wauchula at the Simmons Hotel and was undoubtedly the best meeting of the year. Members of the Manatee and Sarasota County Medical Societies were invited and quite a number were present. Among the guests were Mrs. J. Ralston Wells of Daytona Beach, president of the state Woman's Auxiliary, and Mrs. J. E. Taylor of DeLand, secretary-treasurer of the auxiliary. At the evening dinner, Dr. John A. Simmons acted as toastmaster. The scientific program consisted of a paper by Dr. F. C. Metzger of Sarasota on "Allergic Conditions," illustrated by charts. A very interesting discussion followed the reading of this paper. The second paper was by Dr. B. M. Lancaster of Bradenton on "Sluder Method of Removal of Tonsils." Dr. Lancaster proved himself an artist by free hand drawing illustrations which added to the interest of the paper. The discussion of this paper included practically everyone present. Dr. Jack Halton, Sarasota, one of the discussors, referred back to thirty-seven years ago when he first began to take out tonsils in a most crude way and concluded by referring to the present-day methods and instru-

ments used, etc. Since the meeting date of the state association conflicted with the next regular meeting night, official action was taken to hold no meeting during the month of May.

* * *

Honorary membership was bestowed on Dr. M. B. Herlong of Jacksonville by four Shrine Temples recently. Dr. Herlong is illustrious potentate of Morocco Temple.

* * *

The Pinellas County Medical Society met in regular session April 17th at the Power & Light Building in St. Petersburg. Mr. C. C. Carr read a paper on "Relation of the Press and the Medical Profession." Dr. Gideon Timberlake read a paper on "Significance of Blood in the Urine" and Dr. George Miller read a paper on "Hypertension." The Ladies' Auxiliary met the same evening at the home of Mrs. J. A. Strickland.

* * *

Dr. Jack Halton of Sarasota recently moved his office to the Professional Building.

* * *

Dr. and Mrs. Mayhew Wilson Dodson, Jr., of Munson announce the birth of a daughter, Barbara Jeanette Dodson, on January 16th at Pensacola Hospital, Pensacola.

* * *

The April meeting of the Pasco-Hernando-Citrus County Medical Society was held at Dade City with Dr. T. F. Jackson host to the society. A number of papers were read and discussed and a very interesting meeting was enjoyed by those present.

* * *

Dr. E. C. Swift of Jacksonville recently gave a talk on "Tuberculosis" before the Arlington Parent-Teacher Association.

* * *

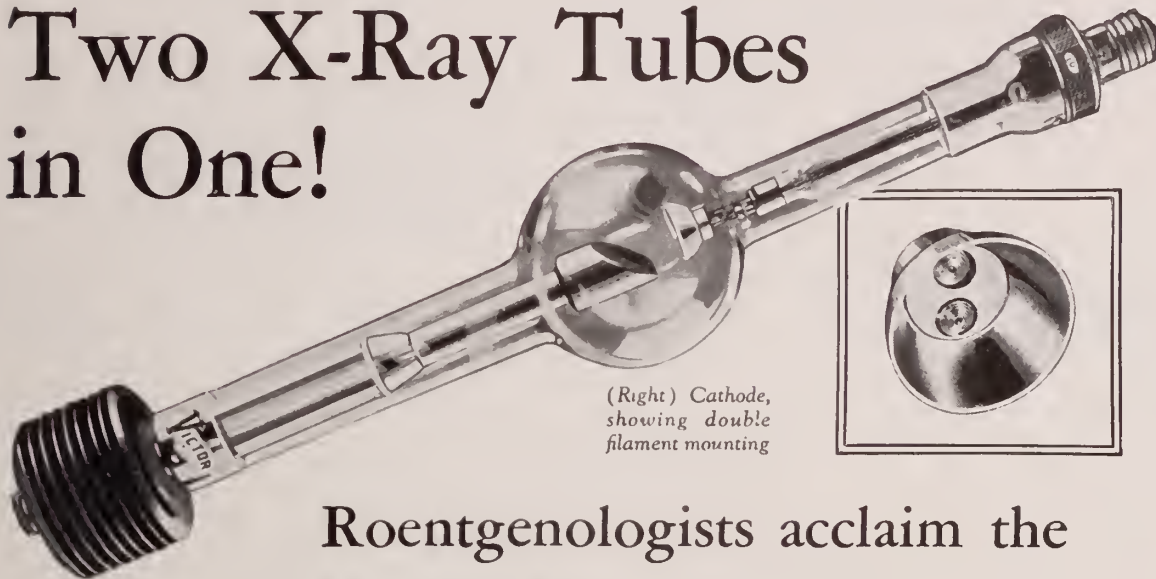
Dr. and Mrs. Nathaniel Marion Weems of Boynton announce the birth of a daughter, Alice Jane Weems, on March 24th, weight 8¾ pounds.

* * *

The regular meeting of the Duval County Medical Society was held at the Mayflower Hotel, Tuesday evening, April 7th. Dr. Ferdinand Richards read a very interesting paper on "Sterility." A moving picture study of under-water animal life was shown by Dr. H. B. McEuen. The meeting was well attended and the discussions of papers unusually instructive.

(Continued on page 550)

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DESCRIBED in the simplest terms, the Double Focus Coolidge Tube is, as its name implies, one tube in which either of its two focal spots is instantly available.

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Think of the added convenience with this tube in routine radiography, when you may select as between the use of a fine or a broad focal spot, without the necessity of changing tubes in the holder, nor the attendant danger of breakage. Simply throw the small switch at the

cathode end of the tube, and you are ready to proceed.

In short, here is a tube which covers practically the entire range of routine radiography, as may be seen in the following table of its capacity ratings:

	Kv. P.	Ma.	Sec.
Small	85	30	1/2
Focal	85	20	4 1/2
Spot	100	10	45
	100	20	2 1/2
Large	100	50	9 1/2
Focal	85	50	12 1/2
	100	75	3
Spot	100	100	1 1/2
	75	100	3


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The Broward County Medical Society had Dr. Howard Kelly of Baltimore as luncheon guest on April 17th. He gave an interesting talk on "Rattlesnake Bite and Treatment."

* * *

The Leon-Gadsden-Liberty-Wakulla-Jefferson County Medical Society met in Quincy during the month of April with a large attendance of physicians from that district and the Second District of Georgia. Dr. J. F. Williams of Monticello presided. Dr. W. F. Lake and Dr. Stephens Brown of Atlanta addressed the meeting, illustrating with lantern slides their subject, "Some Interesting Irological X-rays." Dr. J. G. Gainey of Quincy read a paper on "Laboratory Technique as Handled by the Local Practitioner." Dr. Paul Eaton, director of State Board of Health Laboratories, outlined the State Board of Health plan to establish health units. Dr. H. E. Palmer of Tallahassee was elected delegate to the State Medical Association at our meeting in Orlando in May; Dr. O. G. Kendrick of Tallahassee, alternate.

* * *

Dr. C. M. Sandusky of Jacksonville recently returned from Roanoke, Virginia, where he has been attending a surgical clinic.

* * *

Dr. and Mrs. Edgar Eugene Strickland of Citra announce the birth of a son, Harry Watt Strickland, on March 1st.

* * *

The annual post-graduate summer clinics conducted by Cook County Hospital, Chicago, under the auspices of the Chicago Medical Society will be held June 22 to July 3. Practical instruction in the line of medicine and surgery will be given practicing physicians in attendance. Clinics will be held from 8 a. m. to 5 p. m. each day and the lectures will be given three nights each week at 8 o'clock. For further information, write to the Secretary of the Chicago Medical Society, 185 North Wabash Avenue, Chicago.

* * *

Dr. C. W. Bartlett, city health officer, Tampa, recently made application to the State Board of Health and the United States Public Health Service for a new health survey of oyster beds in and around the Tampa district.

* * *

Dr. W. B. Jordan after a year of post-graduate studies in eye, ear, nose and throat in New York City has returned to Florida and is associated with Dr. A. H. Freeman of Ocala.

Dr. and Mrs. Douglas Dickinson Martin of Tampa announce the birth of a son, Douglas Dickinson Martin, Jr., on March 25th at Municipal Hospital.

* * *

Dr. Herbert Bryans of Pensacola was made a Fellow of The American College of Physicians at the Clinical Session held in Baltimore on March 25, 1931. After the Session he attended four weeks' post-graduate work in New York City.

* * *

Dr. Frank Schubert and Miss Florence O. Fitterer, both of Miami, were united in marriage January 17, 1931.

* * *

The Pinellas County Medical Society held its regular meeting May 7th at the Shrine Club, St. Petersburg. It was Ladies' Night and dinner was served at 7 p. m. followed with dancing, cards (prizes), etc. It was an informal affair but a most unusual and pleasant get-together.

* * *

Born to Dr. and Mrs. T. H. Wallis of Ocala, April 24th, a son, Thos. H. Wallis III.

* * *

Dr. George B. Glover of Monticello and Mrs. Myra A. Taylor of Gainesville were married in February this year.

* * *

Dr. Frederick F. Kumm of St. Petersburg recently addressed the joint annual meeting of the Tuberculosis Association of Duval County and Hope Haven at the Mayflower Hotel Roof Garden in Jacksonville. Dr. T. Z. Cason and Dr. E. T. Sellers of Jacksonville were also speakers of the evening.

* * *

Dr. and Mrs. W. P. Duncan of 1719 Richardson Place, Tampa, announce the birth of a daughter, Ruth Elizabeth, April 20, 1931.

* * *

The Duval County Medical Society held its regular monthly meeting at the Mayflower Hotel, May 5th at 8:15 p. m. Dr. Louie Limbaugh presented a paper on a clinical case of "Massive Atelectasis in a Child Nine Years Old." Dr. L. W. Glatzau read a paper on "Glaucoma." Quite a prolonged and interesting discussion was entered into by the doctors present on organized medicine carried on by the state association.

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Clinical Professor of Nervous and Mental
Diseases, George Washington University.
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REPORT OF THE SIXTH ANNUAL MEETING OF THE WOMAN'S AUXILIARY

The first social function on the program for the women attending the State meeting in Orlando was a theater party on Monday evening, May 11; this was followed by a dance. Tuesday noon a subscription luncheon for the Executive Board and all presidents of county auxiliaries was held at the Little Gray Inn. Mrs. J. Newton Hunsberger, of Norristown, Pa., president of the Woman's Auxiliary to the A. M. A., was a special guest of honor and was presented with a corsage bouquet, as were Mrs. M. A. Lischkoff, of Pensacola, former state president, Mrs. J. R. Wells, of Daytona Beach, retiring state president, and Mrs. S. E. Driskell, of Jacksonville, incoming state president. Routine business was transacted, and Mrs. Hunsberger told of the splendid plans made for the national Auxiliary meeting in Philadelphia in June. Tuesday afternoon a bridge-tea was given at the Country Club; that evening, the annual banquet, followed by a ball, was held.

Wednesday morning, the meeting of the Auxil-

(Continued on page 554)

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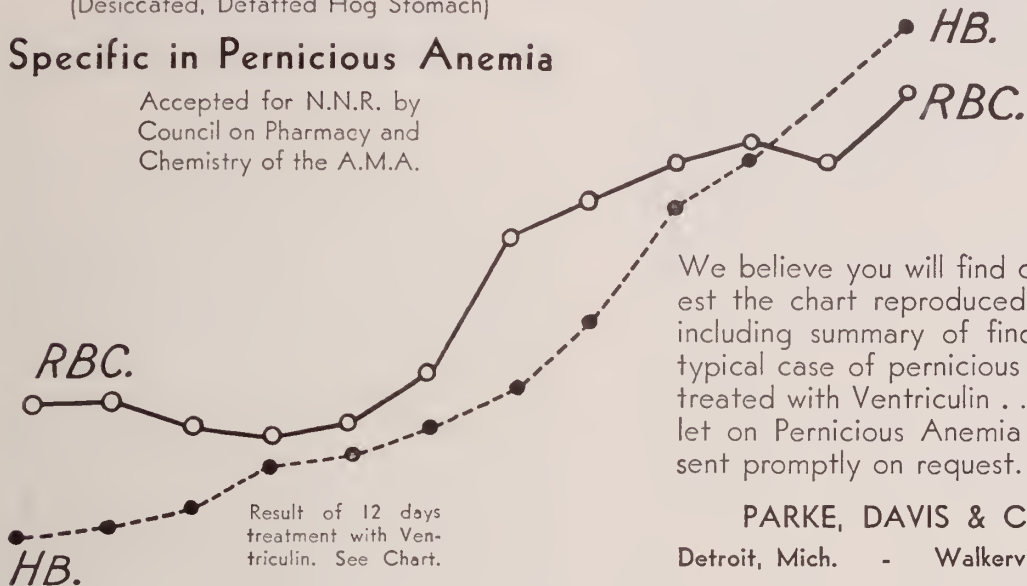
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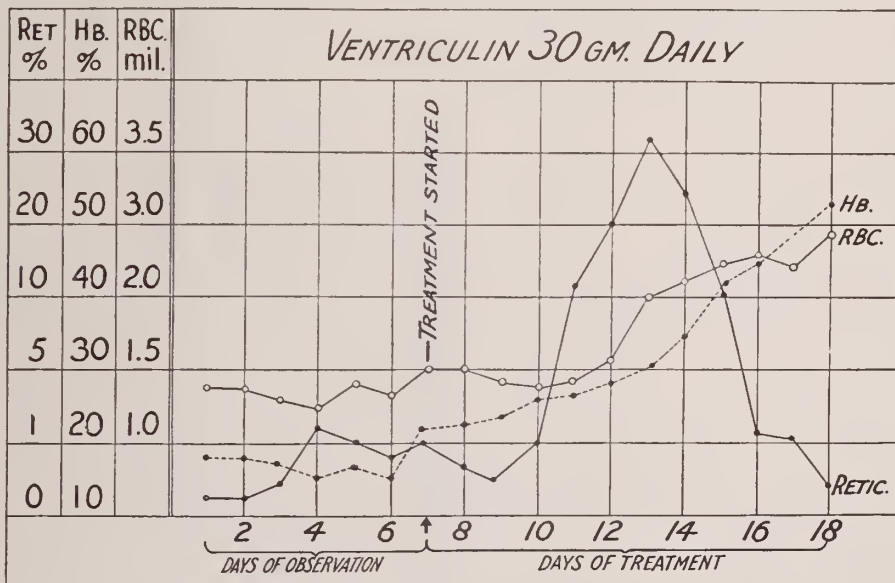
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DIAGNOSIS. Pernicious anemia.

INITIAL BLOOD COUNT: Red blood cells 1.5 million per cu. mm.; Hemoglobin (Newcomer) 21 per cent; Reticulocytes 1.0 per cent.

TREATMENT. Ventriculin 30 Gm. daily.

PHASE OF REMISSION. On sixth day of treatment: RBC 2.0 million; Hemoglobin (Newcomer) 30 per cent; Reticulocytes 32.0 per cent (calculated rise for 1.5 million red blood

cells at beginning of treatment = 22.3 per cent, exceeding expected rise by 9.7 per cent).

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iary was held in the Angebilt Hotel. The invocation was by the Reverend Melville E. Johnson, Dean of St. Luke's Cathedral in Orlando.

Dr. J. C. Davis, President of the State Medical Association, expressed his appreciation of what the Auxiliary is trying to do to help hold up the standards of organized medicine. He said one of the main issues should be the placing of Hygeia wherever it would be used. Dr. G. H. Edwards, of Orlando, spoke words of welcome and these were most graciously responded to by Mrs. M. A. Lischkoff.

Mrs. J. E. Taylor, secretary-treasurer, read the minutes of the previous meeting and reported a paid-up membership of 215, and a balance in the treasury of \$129.00. Mrs. C. C. Webb, of Pensacola, reported having audited the books and found them in good condition.

Mrs. Hunsberger brought greetings from the national Auxiliary and expressed appreciation of the loyalty of the state organizations.

Mrs. Wells then made her report as president. She spoke of her work as exacting but absorbingly interesting and thanked the county organizations for their support. She spoke of the Auxiliary Page in the Journal as one of the outstanding achievements of the year, and urged that it be read.

Mrs. W. G. Post, Jr., St. Petersburg, vice-president, reported constructive work done in an effort toward more organizations.

The report of the Historian, Mrs. J. M. Irwin, of St. Augustine, was read by the secretary. It was voted that a letter of appreciation be sent to Mrs. Irwin for her work in making a very complete scrapbook covering the history and activities of the State Auxiliary.

The reports of County Auxiliaries were then read. These showed considerable activity in health, education, and also along philanthropic as well as social lines. St. Johns and Lee Counties led in having the largest percentage of eligible membership. Much interest was reported in getting subscriptions to Hygeia: Marion and Escambia reporting Hygeia in all the schools, and others reporting the number of subscriptions as follows: Pinellas 62, Broward 17, Volusia 12, Duval 75. Other counties reported subscriptions but not the exact number. Mrs. H. H. Harris, of Jacksonville, who is a member of the National Hygeia Committee, reported that Florida had met its quota of Hygeia subscriptions.

(Continued on page 556)

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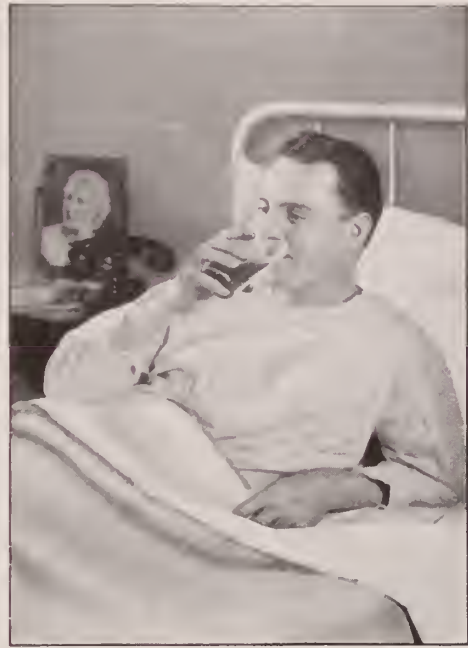
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Mrs. Leigh F. Robinson, of Ft. Lauderdale, State Program chairman, reported having sent out copies of study programs as outlined by the National Auxiliary.

Mrs. J. C. Davis, of Quincy, Chairman of Public Relations, advised against affiliating with lay organizations, except upon the advice of the Medical Society.

Mrs. M. A. Lischkoff read the proposed Constitution and By-Laws, which, with a few changes, were adopted.

Delegates were then elected to represent Florida at the National Auxiliary meeting in Philadelphia. They are as follows: Mrs. J. R. Wells and Mrs. W. G. Post, Jr., with alternates, Mrs. H. Q. Jones and Mrs. A. L. Mills.

Mrs. M. J. Flipse, of Miami, read the report of the nominating committee, which was accepted and the following officers were elected: president-elect, Mrs. Leigh F. Robinson, Ft. Lauderdale; vice-president, Mrs. W. G. Post, Jr., St. Petersburg; secretary-treasurer, Mrs. E. W. Veal, South Jacksonville; historian, Mrs. J. M. Irwin, St. Augustine. Committee chairmen are as follows: Program, Mrs. M. J. Flipse, Miami; Finance, Mrs. J. E. Taylor, DeLand; Public Relations, Mrs. J. C. Davis, Quincy; Hygeia, Mrs. E. G. Peek, Ocala; Press and Publicity, Mrs. Edward Jelks, Jacksonville; Auditor, Mrs. Rufus Thames, Milton.

Mrs. J. R. Wells, retiring president, then in a few well chosen words, presented the gavel to Mrs. S. E. Driskell, of Jacksonville, the new president. Mrs. Driskell accepted it and urged cooperation in continuing to build on the foundation so well laid by those who had gone before. She then presented the new officers and committee chairmen.

Mrs. Wells and Mrs. Driskell were presented with flowers by the Orange County Medical Society.

At noon, the hostesses served their visitors a delightful buffet luncheon at the home of Dr. and Mrs. J. S. McEwan.

The post-convention Executive Board meeting was then held. This was followed by a motorcade through Orlando and Winter Park, and the festivities concluded with a tea at the home of Dr. Rosalie Slaughter Morton, in Winter Park.

The following members and guests registered at the Orlando meeting:

(Continued on page 558)

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	Gms.	Prot.	Fat	Carb.	Cal.
1 tablespoon Knox Gelatine	7	6
1/4 cup cold chicken broth or water
1 1/4 cups boiling chicken broth, fat free	..	..	..	..	..
1/2 teaspoon salt	..	..	..	..	..
Pinch pepper	..	..	..	..	..
1 cup cooked chicken, cubed	125	24	20	..	..
1/4 cup cream, whipped	55	1	22	1.5	..
Total	31	44	1.5	526	..
One serving	5	7	..	33	..

Soak gelatine in cold liquid for five minutes and dissolve in hot broth. Season with salt and pepper and chill until nearly set. Fold in chicken and whipped cream. Turn into molds and chill until firm. Serve on lettuce or garnished with parsley and strip of pimento.

CARROT and SPINACH MOLD

(Six Servings)

	Gms.	Prot.	Fat	Carb.	Cal.
1 1/2 cups cooked carrots cubed	210	2	1	19.5	..
1 tablespoon butter melted	12.5	..	11	..	..
1 egg well beaten	50	7	5	..	..
1 teaspoon salt	..	..	..	..	..
1 1/2 cups cooked spinach chopped	300	6	1	7	..
2 tablespoons butter melted	25	..	21	..	..
1/2 teaspoon salt	..	..	..	..	..
Sprigs of parsley	..	..	..	..	..
Total	15	39	26.5	517	..
One serving	2.5	6.5	4	86	..

Mash carrots with a fork and mix with beaten egg and one tablespoon of melted butter and salt. Fill small greased molds half full of the carrot mixture. Season the chopped spinach, add melted butter and fill molds to top with spinach, packing them tightly. Place molds in pan of hot water and bake in moderate oven for 20 minutes. Turn out on hot platter and serve garnished with parsley.

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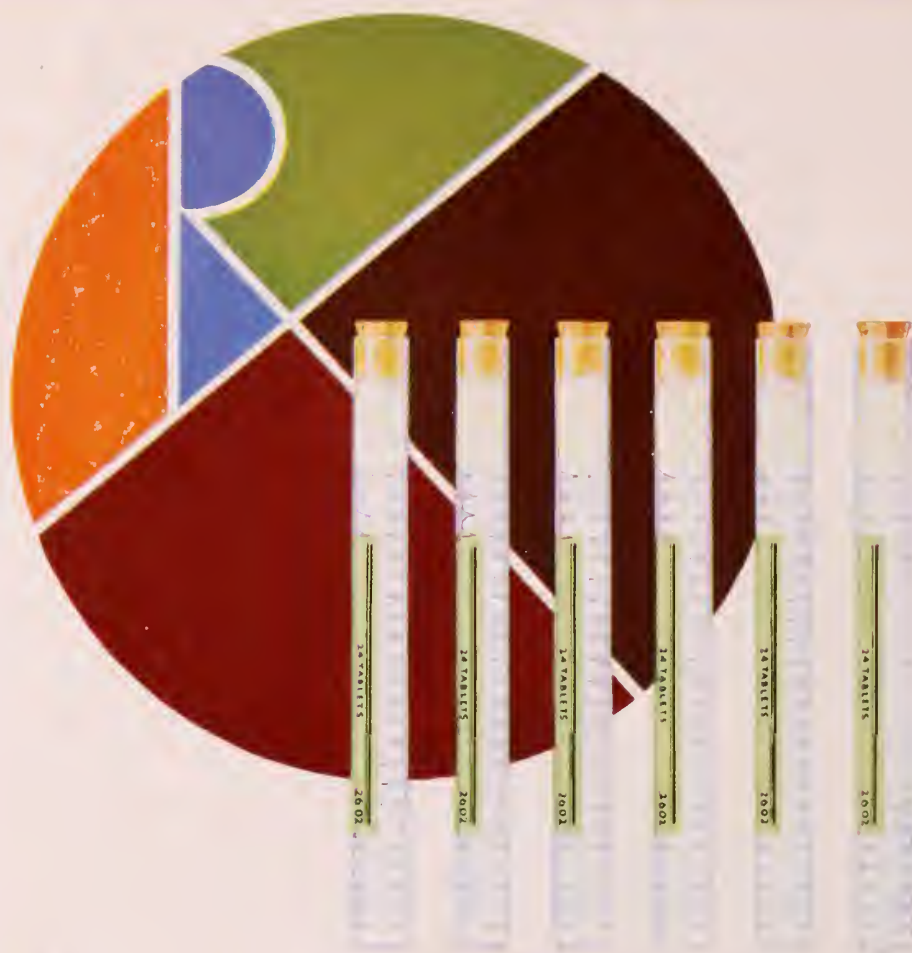
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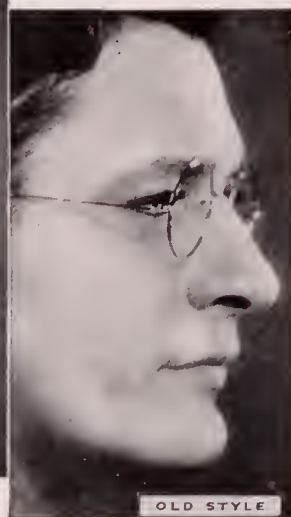
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J147

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CORRECTING AN ERROR

In the Journal of the A. M. A., March 28th, 1931, page 30, we inadvertently stated the iron content of Mead's Cereal to be 68 milligrams per hundred grams. (This figure was confused with .0068 gms. iron per ounce.)

The correct content is 24 mgs. iron per 100 gms. But even so, Mead's Cereal contains —

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OPPORTUNITIES AND RESPONSIBILITIES OF THE RAILROAD SURGEON*

SOUTHGATE LEIGH, M.D., F.A.C.S.,
Norfolk, Va.

The Railroad Surgeon has always been one of the best assets of the railroads of the country. With a few rare exceptions, this fact was, up to a comparatively short time ago, not recognized.

During the Great War, as an economic measure, the roads were placed under government control.

In September, 1918, Director General McAdoo appointed a Committee on Health and Medical Relief for the railroad administration, consisting of the following: Dr. D. Z. Dunott, chief surgeon of the Western Maryland Railroad; Dr. T. R. Crowder, medical director of the Pullman Company; Dr. G. W. Cale, Jr., Dr. Victor G. Heiser, Dr. H. M. Bracken.

Quoting from the report of the committee published in 1920:

"Since November 22, 1918, the committee has held frequent meetings, has had referred to it through the Bureau for Suggestions and Complaints, a large number of complaints received from the general public concerning the insanitary condition of stations, cars, shops and toilets; this gave an excellent opportunity to investigate the conditions which patrons of railroads complained of, and we were able in many instances to suggest a remedy; also handled a number of health conditions that confronted the railroad administration to a satisfactory conclusion; and reported from time to time upon questions submitted to it by the railroad administration.

"In order to familiarize itself with railroad conditions insofar as they applied, the committee made surveys through questionnaires sent to all railroads under Federal control, and inspected railroad sanitary and health conditions in 32 states. Upon knowledge gained during these inspections and data procured through the questionnaires, the committee has based its recommendations.

"The committee recognizes that probably its best service is along the line of preventive medicine and preventive surgery, which offers opportunity not only for humanitarian effort but will make possible greater efficiency and lessened cost in operation. Typhoid fever, smallpox, malaria, and hookworm are preventable from a practical standpoint, in fact the continuation of these diseases should not be tolerated. Reconstruction surgery is in its infancy, opening up a great field for research and betterment in the care of the injured.

"The medical and surgical departments connected with the railroads offer unusual opportunity for the disseminating of information on these several subjects."

The report reviewed the subjects of preventive medicine, including malaria mosquito control, vaccination, hookworm disease, drinking-water supply, venereal disease; and preventive surgery.

Under this head the report was as follows:

"The experience of the war demonstrated that disability from accidents could be greatly reduced by the employment of new methods and means which have been recently discussed. One of the first acts of the committee was to visit railway shops and properties with the view to urging proper protection for machines and processes liable to cause accidents.

"Judging by the army experience, the percentage of disability and treatment of serious injuries can be greatly diminished. Many injuries which had been thought would leave permanent or partial total disability were found to be remedial injuries. The committee feels that better training for railway surgeons in the more modern procedures is highly desirable; to accomplish this end the committee arranged for trip transportation over foreign lines so that they may be enabled to attend medical meetings, visit clients and otherwise avail themselves of instruction. In order to promote this end still further it is highly desirable that the surgical and operating departments of the railroads be brought in closer contact. If railway surgeons are to bring the greatest benefit to employees of this newer knowledge, it will be necessary to provide additional facilities in the

*Read by invitation before the Twelfth Annual Meeting of the Florida Railway Surgeons' Association, Orlando, May 11, 1931.

way of new apparatus and other special means of treatment and increase the hospital accommodations; and with that in view the committee is continuing this study and will make further recommendations later."

The questionnaire mentioned above and filled out by the various regional directors, furnished splendid material for comprehensive and standardizing efforts for the improvement of the railroads from the standpoint of safety, health and surgical work.

The Committee also submitted the following valuable data: a complete set of sanitary regulations, a set of rules governing physical examinations for railroad employees, a memorandum in regard to rest houses, a memorandum covering separation of claims and surgical departments, a memorandum concerning privilege of trip transportation to local surgeons to attend medical meetings, a memorandum concerning the control of malarial fever, and a model first aid kit, with directions for its use and maintenance, and an estimate of cost.

Correspondence covering recommendations of the committee regarding the practice of laymen making vision, hearing and color examinations was submitted.

The report was published under the title of "Survey and Recommendations of the Committee on Health and Medical Relief."

It is a most helpful and valuable document and inaugurated a new era in railroad surgery.

Before that time, the railroad surgeon, as a rule, was looked upon as a necessary evil. He received but scant consideration. He was called upon only in cases of accident and was but poorly paid.

Dr. D. Z. Dunott of Baltimore was one of the greatest medical organizers the world has ever known. It was he who suggested the formation of the committee of the railroad administration and it was he who, working without compensation, directed the magnificent work described in the report.

It was my good fortune to have had the great pleasure and privilege of traveling with him returning from a meeting in Florida just after the railroads were returned to their owners.

He showed me a copy of the Report and explained the work in detail and discussed with me the pressing need of a continuance of the splendid constructive effort.

It was decided then and there that the matter

should be laid before the next meeting of the Chief Surgeons' Association with a strong plea for the formation of a medical and surgical section of the American Railway Association.

The Chief Surgeons' Association, of which Dr. Dunott and Dr. Crowder were important and influential members, readily agreed to the proposition and the application was promptly made to the American Railway Association and accepted by them. The organization was launched in December, 1920, and placed on a permanent basis in April, 1921.

Thus was formed the medical and surgical section of the American Railway Association which took up the work where it was left by Dr. Dunott's committee and pushed practically all of the projects to a successful conclusion. Dr. Dunott was chairman of the section for two years and was the leading spirit in its splendid development. As a member of his "cabinet" (Committee of Direction) it was my privilege to work side by side with this great man. Mr. Aishton, its president, and the other officers of the American Railway Association, the Public Health Service, the Association of State and Territorial Health Officers, and the great railroads of the country cooperated splendidly and efficiently.

Many and vital matters were developed for the lasting benefit of the railroads, the public and the railroad surgeons. The standard sanitary code, adopted by practically every state in the Union, was the first most helpful effort. Standardization of railroad hospitals according to the plan of the American College of Surgeons was probably next in importance. Standardization of fracture work, of first aid work, of examination of employees and various other constructive measures were rapidly developed.

The most difficult problem before the medical and surgical section of the A. R. A. has been that of foreign transportation. The parent organization representing the roads has at all times been friendly and willing but at the outset the Interstate Commerce Commission assumed a remarkable position, denying the privilege to the local surgeon because of his not devoting his entire time to the work, and yet permitting the privilege in the case of the local attorney. A great deal of time and effort has been expended in trying to clear the matter up. Finally an agreement has been reached through which the local surgeon has restored to him the privilege granted under the U. S. Railroad Administration, of obtaining for-

eign transportation to attend medical and surgical meetings and clinics. Even this privilege is not universal, because a few roads still refuse the request.

The section continues to carry on its good work through its annual meetings and its wide influence. Practically all of its recommendations have been approved by the parent organization and adopted as standard procedures by the individual railroads. The wonderful efforts of Dr. Dunott brought from Dr. Franklin Martin, the father of the American College of Surgeons, the statement that Dr. Dunott had done more to advance in a practical way the ideals of the American College of Surgeons, than any other man.

Dr. Dunott, after retiring as Chief Surgeon of the Western Maryland Railroad, accepted the position of Medical Director of a large insurance company and did unique and splendid work all over the country in organizing the surgical workers of that company on a modern and progressive basis, under which lower rates were granted to fellows of the American College of Surgeons and to hospitals standardized under that agency. At the time of his untimely death from accident, he was developing his field force on a unique and constructive plan. I look upon him as the father of modern railroad surgery in America and as the man who put the railroad surgeon "on the map." All honor to him, to his genius, his love for his fellow man, his energy and determination and the great work which he did for the railroad surgeon.

The address of President Powell before the Southern Medical Association in Miami, and that of Vice-President Massey of the Pennsylvania Railroad at the meeting of the American College of Surgeons in Chicago, showed that the railroad executives now look upon the railroad surgeon as one of their most important assets.

He is furnishing modern handling for accident cases, high class hospital facilities for the seriously injured, looking after the sanitation of equipment, roadways and terminals, systematizing first aid work, examining and re-examining employees, and also exercising a splendid influence on the public in their attitude towards the roads. With few exceptions his good work is being fully appreciated.

The radical change in attitude on the part of the management of the roads brings with it a heavy responsibility for the surgeon who must bestir himself to still greater efforts and more perfect

results. In these troublous times, although the railroads are giving splendid service, both passenger and freight, better than ever before, yet they are facing serious difficulties and unreasonable competition. The railroad surgeon is usually an influential man in his community and has wide influence with the people. In conjunction with the organized railroad employees, he can do much to bring the people to their senses and to let them understand that the railroads are indispensable to the communities; that no section can get along without them; that they must be supported and patronized and that automobile, bus and truck competition is unreasonable and destructive.

Much can be done to influence the public and to prevent unfriendly legislation. It will not be difficult to start a reaction to swing the public the other way.

The careful examination of employees by the surgeons, will protect the companies from unjust claims, and will with trainmen often prevent serious accident. After any train accident, the employees involved should have a careful physical examination as well as a close questioning regarding habits, sleep and nervous strain or anxiety. A heavy responsibility rests on the examining surgeon when the lives of so many passengers may be endangered by sudden illness or other incapacity on the part of trainmen.

In the strictly surgical side of the surgeon's work there are many and important details. A minute history taken soon after an injury, together with a sufficiently general examination will often prove of great value in medico-legal matters. The kind, gentle and considerate treatment of the injured, which should be extended in every case, is often of great aid to the railroad, whose management always wants its injured employees or passengers to have the very best of care and attention. In the handling of wounds, none should be considered too trivial to demand prompt and thorough attention.

Railroad surgery is one department of our profession where it is impossible to get along safely without the free use of chemical antiseptics, since all wounds are more or less infected at the time of injury. This means antisepsis. Bichloride and carbolic still have their place. Iodine is undoubtedly very helpful in antisepticizing the skin, though it cannot be used in conjunction with the mercury preparations on account of chemical combination taking place. Mercurochrome, the watery solution for raw surfaces and the alcohol

acetone preparation for the skin is most helpful, while dichloramine T is very useful to clean up a dirty wound. Dakin's solution, not made from tablets but prepared strictly according to Carrell's advice and injected every two or three hours day and night is of great aid in sterilizing deep, infected wounds. In first aid work, employees should be taught that any wound, however slight, requires prompt attention.

The first aid handling of wounds by the local surgeon is of great importance, in minor cases to quickly sterilize and prevent prolonged treatment, and in major cases so that when they reach the hospital, the operating surgeon can do better radical work, especially in compound fractures.

In compound fractures, as a rule, if received in the hospital early enough or clean enough, radical operation may be done with thorough cleansing, so-called "debridement", antisepticing and loose closing of the skin without drainage materials and with heavy compressing dressings. In this way, nearly all compound fractures may be treated as closed wounds with quick healing of the soft parts. Those compound fractures, already badly infected on reaching the hospital are best treated by Dakin's solution and tubes.

The handling of fractures without the aid of the X-ray is rarely advisable. As a matter of fact, not only is the X-ray essential in fracture work but it is becoming more and more important to have expert X-ray men with the very best equipment to do the work. This is evidenced by the increased number of slight spine fractures that are coming to light. It would appear that many such cases have been overlooked in the past.

Colles' fracture of the wrist should be mentioned as a fracture which is still being treated incorrectly at times, due to the failure to completely release the impaction.

To those of us who have always advocated the open operation for fractures, where it is impossible to get good apposition, by simple means, it is refreshing to note that the professional mind is again leaning towards open operations and also giving up its opposition to metal plates. It has been most interesting to watch the way the pendulum has been swinging during the past several years, first one way and then the other. We are too prone to go to extremes, and often fail to adopt and adhere to the conservative course.

I feel very strongly that the opposition to open operation and plates has been created by infection from imperfect technique and that brings us to

the question of surgical cleanliness, a simple but dreadfully neglected and yet vital part of our work.

As I have stated several times before, in previous discussions, there is too much infection in the present day hospitals, due to lack of operating room control. In the early days of surgical cleanliness, there was in each principal hospital, one dominant figure who saw to it that the rules of cleanliness were carried out strictly. Now it is nobody's business and the matter is left to the nurses who know nothing of the early history of antiseptics and nothing of the great danger from carelessness.

Soft tissue will take care of a certain amount of infection but bone will not. To do successful operations on bones there must be *absolute cleanliness*. With it the results are perfect, whether plates or other foreign materials be used or not. I seriously doubt if a clean bone operation can be safely performed in a hospital where septic discharges are not promptly caught and destroyed, or in an operating room where both septic and clean cases are handled indiscriminately; where the same gloves are used for all kinds of cases (and admittedly in the average hospital, glove sterilization is far from perfect); where the skin has not been prepared in the most perfect manner; where the skin is not kept completely covered during the course of the operation; where the whole operating staff is not deeply impressed with the vital importance of real surgical cleanliness.

In railroad work, as in other surgical procedures, in an extreme emergency, a doctor has to do the best he can with the facilities at hand. It is rarely the case, however, that a safe hospital is not near enough by for careful transportation. Therefore, in major cases, the local surgeon should give the best possible first aid, especially combatting sepsis, immobilizing fractured bones, stopping dangerous hemorrhage, looking after depressed physical conditions and getting the patient to a hospital where the best care can be given.

The Golden Rule is a wonderful guide for us in our profession. Strict adherence to its principles would very frequently modify our course. Except in emergency we should attempt nothing for which we are not qualified and equipped, giving only emergency aid until the patient can be transported.

These rambling and imperfect remarks have been presented to you for what they are worth, in the earnest hope that they may be of some interest to you and possibly some help.

BERI-BERI—REPORT OF A CASE IN A DIABETIC

E. W. BITZER, M.D., F.A.C.P.,
Tampa

The rapid evolution of the knowledge of deficiency diseases in the last decade has proved a stimulus to their early recognition and treatment that will prevent much unnecessary suffering and economic loss. The clinician will anticipate the development of pernicious anemia, pellagra, beri-beri and other nutritional disturbances to such an extent that well-developed cases will rarely be seen, but this state will not be reached until we are able to answer the question: Why is it that among individuals living under similar conditions, some develop deficiency diseases and others do not?

PREVALENCE OF BERI-BERI

Beri-beri is probably more frequently encountered in the Orient (1) than in any other part of the world. In Japan the 1924 death rate was 34.2 per 100,000 population.

In the Philippines (2), the committee on beri-beri estimated that 8 per cent of all deaths was due to this disease and that 91 per cent of these was in infants under one year of age. Epidemics occur in other countries as well, especially in India, but isolated cases have been found on almost all parts of the globe. Although beri-beri is not common in a well-developed form in this country, sporadic cases have been reported from most parts of the United States, and in certain sections of Louisiana (3) it has been endemic for a number of years. Hoobler (4) of Detroit thinks that it is frequently seen in its early manifestations in children.

ETIOLOGY

Most authorities agree that the chief factor in the production of beri-beri is a deficiency of the anti-neuritic fraction of vitamin B which occurs most extensively in countries where polished rice is a staple food and often the chief article of diet. The Philippine commission (2) has suggested that the retention of 50 per cent of the pericarp of rice is sufficient protection against the disease. It is admitted, however, that cases occur that can not be explained on such a basis and many individuals who should develop the disease do not do so. Many investigators have shown that a similar condition may be produced in pigeons and other animals by feeding polished rice and Grey (5) has proved that different strains and ages of

pigeons have varying susceptibilities. How different kinds of (5) animals may react to the same feeding experiment is shown by the fact that, on a diet exclusively of wheat (Berg) chickens remained healthy, rats and pigs developed polyneuritis while guinea pigs developed scurvy. Pigeons, hens and rats thrive on a corn diet (Halst and Frolich) but rabbits contract polyneuritis and guinea pigs scurvy.

Grey (6) has pointed out the difference in susceptibility to, and type of, beri-beri in the active and sedentary, and likewise in the city and country dwellers in Japan. He emphasizes the importance of total deficiencies in the diet and of other factors such as diathesis, excessive energy exchange, heat, humidity, adenoids and infected tonsils. Gastro-intestinal disturbances, especially diarrhea (7) often precede the development of beri-beri. Evans and Lepkovsky (8) have proved that natural fats in the diet tend to decrease the effect of a deficiency in the anti-neuritic vitamin B and others have suggested that deficiencies in vitamin A may be a precipitating factor.

Katsunura (9) has isolated a bacillus from the stools of patients suffering from beri-beri that shows a positive agglutination reaction with the serum. Experimental animals inoculated with this bacillus developed the disease quicker than the control animals. On the contrary, Bechdel (10) explains the fact that cows do not develop vitamin B deficiencies owing to the presence in the rumen of the flavo-bacterium as the predominant flora. This organism fed to rats on a vitamin B free diet has proved highly potent in preventing the development of symptoms. Such experiments emphasize the need for a careful study of the intestinal flora in connection with this problem.

TYPES OF BERI-BERI

There are essentially two types, the wet and the dry. The wet type is associated with failure of the right heart and is usually more acute than the dry type which is characterized by marked changes in the nervous system. Kufer (11) suggests four types of cases: neuritic, edematous, mixed and cardiac. It is probable that all cases have some degree of water retention even though it may not be detected on physical examination. Cases and even epidemics (7) have been reported in which no appreciable involvement of the nervous system has been found.

Kufer reports (11) in a series of 27 cases a loss of knee jerks in all and cardiac failure in 15.

PATHOLOGY

Wenkebach's (12) work tends to show that beri-beri in all its manifestations is the result of the absorption of water by the tissues, especially the muscular and the peripheral, sympathetic, and parasympathetic nervous systems. Swelling in the skeletal muscles is more pronounced and occurs earlier than in the heart muscle. It is marked by soreness in the calves which causes difficulty in walking. The right side of the heart is more severely involved than the left, which explains the swelling of the liver and the extremities with ascites and the absence of pulmonary edema except as a terminal event. The conduction system is not involved, but there is a decrease in the A-V (11) conduction rate similar to that occurring in experimental water swelling of the heart, and arrhythmias are uncommon. The electrocardiograms (11) (12) show a tendency to a deviation of the electrical axis to the right.

Experimental polyneuritis in pigeons has resulted in pronounced changes in the pancreas, which in well developed cases has atrophied to one-sixth the normal size (5). These changes are so pronounced that this organ may reach an almost fluid consistency. The same observer also found enlargement and marked changes in the liver, an accumulation of some substance presumably a carbohydrate with a degeneration of the cellular elements.

Beri-beri occurs in the course of many chronic illnesses but it has not been associated especially with diabetes. If the changes in the pancreas that occur in pigeons are common to man it is difficult to understand why glycosuria would not be a frequent finding in such cases unless the islands of Langerhans are spared. Usually no changes in the carbohydrate metabolism are found. Sure (13) has shown that hypoglycemia may be present in the terminal stages in polyneuritic animals. Lepkovsky (14) failed to find any appreciable lowering of the glucose tolerance in animals suffering for a long period from vitamin B deficiency except those approaching a final breakdown from beri-beri.

CASE REPORT

April 9th, 1930. Male real estate broker; married; 60 years of age.

Family History: Both father and mother had hemiplegia and the mother was a diabetic. His father died at 72 and mother at 74 years of age. His paternal grandfather was a diabetic and died at 76 years.

Past History: Had typhoid fever at 20 years of age. At the age of 40, he weighed 298 pounds. In 1921 his systolic blood pressure was 220. All his life he has lived on a diet almost exclusively of meat, potatoes and sweets. Sugar was first found in the urine in 1922 and he took insulin from 1926 to 1929. The highest blood sugars were August 25, 1924, 367, and April 4, 1927, 450. However, most of the time during this period the blood sugar was under 200. Three years ago he developed a numbness in the right side and two days later in the left side without apparent motor disturbances. He has complained of weakness and has shown some evidence of cardiac disturbances during the last year and a half. When seen seven months ago his skin had a peculiar, waxy yellow cast and there was marked general anasarca with orthopnea, almost total loss of appetite, incoordination of the muscular system, diminished tendon reflexes, sensory disturbances and muscle tenderness in the calves of the legs. Mentally he was sluggish and often did not recognize his friends. During the past seven months his blood pressure has ranged from 140 to 115 systolic and 70 to 80 diastolic. The blood sugar January 11, 1931, was 143. He had not taken insulin during this period. The blood urea nitrogen and creatinin were normal and also the blood counts. Both spinal fluid and blood Kolmers were negative. A diagnosis of beri-beri was made and under appropriate treatment there was a spectacular change in his general appearance, with rapid disappearance of the edema and cardiac symptoms and considerable improvement in the nervous system.

Present Condition: He is 5 feet 7 inches tall and weighs 152 pounds. There is some difficulty in walking and he complains of parasthenias in the hands and feet and general weakness. The mouth, throat and thyroid are negative. He has lost the waxy pallor and the skin is normal in color. There is some discoloration of the skin over the tibia but no edema. The lymphatic system is normal. The radial arteries are not felt. The blood pressure is 140/85, temperature 98.6, pulse 72 with ventricular premature beats, respiration 20. The lungs and abdomen are normal. The left border of the heart measures 9 c. m. from the midline and the midclavicular line is 7½ c. m. The substernal dullness at the second space is not increased. All the heart sounds are heard with difficulty but no murmurs are present. The pupils are irregular, the right larger than the

left, and they react poorly to light. The elbow jerks are absent. The right knee jerk is absent and the left is decreased. Absomal cremasteric and plantor reflexes are absent and the Babinsky is negative. Sensation, both protopathic and epicritic is diminished in both extremities. The vibratory sensation is absent in both legs. There is a coarse tremor on movement in the hands and feet and the heel to knee test is done with difficulty.

Subsequent History: On June 10th, his blood pressure was 120/85. The left border of the heart measured 8 c. m. and no premature beats were heard. Both knee jerks were absent. He was walking better and showed a gradual general improvement. On July 14, 1930, the blood pressure was 108/78 and he was still improving.

COMMENT

It is not difficult to understand the development of a deficiency disease in this case where we find such peculiarities of diet, and gradual loss of weight preceding the diabetes. This loss of weight continued under the diabetic regime. The total deficiency in the diet was probably as much of a factor in producing the beri-beri as was the vitamin B deficiency.

The diabetes was not a very severe type, nevertheless required the continuous use of insulin over a considerable period of time. It is surprising, however, that since he developed beri-beri he has been on an unrestricted diet except for sugar and his blood sugar remains not far from normal without insulin. The change in the blood pressure from a hypertension to a hypotension is even more unexpected. This may be plausibly explained by involvement of the vascular nervous system by the polyneuritis.

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OUR MEDICO LEGAL STATUS*

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We, as Railway Surgeons, associates in an enterprise where speed is at a premium and thus unusually fraught with danger to employees, and patrons as well, are sure earlier or later to be called into the Halls of Justice—or as a legal friend of mine once said, after musing over the evidence and the award in a famous trial—"A Court of Injustice"—to be questioned both as to fact and as to our medical knowledge.

As an ordinary witness we must testify to facts, which have come to us through our various senses, that is, to things we saw, heard, smelt or felt. In doing this, we are setting up facts from which, with the testimony of others, the jury may draw conclusions and upon which it may base its award. This is very easy and should cause no embarrassment; it is a straightforward declaration.

But, as surgeons, through years of intensive study, trained in one branch of science—and not a positive science in many ways, due to the great diversity of sensitiveness of the nervous system and the factors of imagination and introspection in man—we may be asked to testify to the late results of an injury. Will it be permanent? if not, its probable duration; the effect upon the earning ability of the individual; the influence of the shock upon the nervous system; whether there were any pre-existing handicaps which might be accentuated by the present injury or which of themselves would delay recovery; and many other questions emanating from the fertile brains of the attorneys. In these instances, we are no longer ordinary, but we become expert witnesses.

In some states, there are specific statutory provisions regarding the payment of special fees to expert witnesses and in these instances, the physician can refuse to testify as an expert unless the fee is paid. But, in states where this statute is not in force, there are numerous decisions whereby a physician called as an ordinary witness, must, if so ordered by the Court, testify as an expert. Yet, while this is true, no Court can compel him to undertake a special course of study or investigation for the purpose of qualifying as an expert.

In general, if the witness, though a physician, has testified only to facts observed by him and not to any medical opinion based thereon, he can

*President's Address, presented before the Twelfth Annual Meeting of the Florida Railway Surgeons' Association, Orlando, May 11, 1931.

not be cross-examined, as to his professional opinion; nor will the Court permit questions to be put to him which tend merely to discredit his care of a patient and in no way affect the value of the testimony; also the lesser degree of competency asserted for the witness does not justify a drastic examination. The extent of his observation, his fairness or bias, and any facts leading to a different conclusion, may be fully inquired into. He may also be cross-examined, as to statements made by him out of Court, inconsistent with his testimony. But abstract and hypothetical questions are not usually permissible to a non-expert even on cross-examination. I am told the scope of cross-examination and its necessary limitation to avoid collateral issues and an undue expenditure of time, must necessarily be largely in the discretion of the trial Court.

The examination of experts does not differ in any specific way from the examination of ordinary witnesses, except as to the special rules for the framing of hypothetical questions, and the rule requiring an expert witness to state the facts on which his opinion is based, so far as they can be described to the jury, before giving his opinion. But, the fact is, that opinion evidence is valuable only as it is made clear to the Court and jury, and acts persuasively upon their minds.

The opportunity for bias or prejudice in forming and testifying to mere opinions, makes it necessary to permit a very wide scope to the examination of the witness, both in direct and in cross-examination. In direct examination, for instance, it seems to be generally held that the opinion witness should be permitted and even required to state the reasons for his opinion, although this may give his testimony something of the nature of an argument. It is permissible to cross-examine the witness as to his experience and competency, even by abstract or by hypothetical scientific questions not directly relevant, but adapted to test his learning and scientific intelligence; or by questions as to authority of scientific books and the correctness of statements therein contrary to the testimony of the witness. The cross-examination should be allowed a liberal range, touching all matters testified to or tending to test the temper, motives, intelligence, accuracy, credibility or means of knowledge of the witness. So he may be questioned as to his impartiality or bias, the methods of investigation pursued by him in the case at bar, and the reasons on which his opinion is based; the difference between his opinion and that of other

experts, and errors of opinion which he has made in other similar cases.

An attorney of ethical standing, when he calls a railway surgeon to the stand or when he cross-questions him has a right to expect, and for his own professional standing, the physician should give: first, a fair statement of the conditions found to obtain by him; second, the statement should be couched in every-day language, intelligible to the layman, that is the Court and jury, and free insofar as possible from technical terms; third, consistency upon direct and cross-examination.

You will readily comprehend in the latter case that consistency depends upon both attorney and witness becoming better acquainted with each other's knowledge of the case in hand so that the facts and opinions may be most logically and forcibly presented.

I feel that a physician in justice to himself and to his reputation should not go on the stand unless he has first refreshed his memory, as to the actual facts about which he proposes to testify, and second has reviewed the authorities which have a bearing upon such facts, and third, he should be aware of the points which the attorney desires to have brought out in answer to his question. It is no discredit to have it developed that you were consulting authorities and using care to present your evidence in a thorough manner and that the attorney had passed upon your knowledge of the matter in hand.

With these above three factors in mind, the witness should be able to answer questions positively, rather than qualifying them and would be less likely to be embarrassed and confused by questions on cross-examination, presenting problems germane, but the facts and factors of which were somewhat hazy in his mind. This confusion would weaken the effect of the direct testimony. But if it ever does arise in your occupation of the witness box, that admissions and modifications and uncertainty of mind seem to approach a denial of your original declarations and these general admissions and modifications are made to apply to the concrete case, the case in hand, you have a right to explain how they do *not* affect the integrity of your original declaration. The opposing attorney may try to prevent this, objecting to a lecture or an educational talk from the witness box, but the Court will support you, for it is your job to instruct the jury on technical points in medicine, which are outside their knowledge.

This instruction is more positive if any seeming discrepancies are carefully explained in simple words and phrases which anyone can understand.

It has been stated many times that the present system of adducing expert testimony has a great defect, in that the expert tends to become an advocate; that he may be employed because his opinion happens to coincide with that which is necessary to his employer's case, or, as sometimes happens, that he has worked up an opinion to fit the case. In either event, he is produced as a witness with the sole object in view of making out a case; and he appears, as truly as does the counsel, to advocate a particular conclusion and to bring to bear every mental resource to compel a decision favorable to the cause he represents for pay. The law which considers that a medical witness is fit to qualify as an expert has its weak point, in that a physician, who is not familiar with the rudiments of the subject, that is a specialty, may testify in a case and may be qualified as an expert and speak with authority.

There are men well known among their professional brothers as incompetent, erratic, and unreliable, as well as those seeking notoriety and financial gain. The worthy men in any profession are always well known and with intelligent care, competent and reliable men can readily be secured. At present any individual, regardless of his standing in his profession or his reputation for truth and honesty, may qualify as an expert and cannot be challenged unless he has actually been convicted of a felony. Our courts are practically the only institutions that will recognize an individual as competent merely upon his own representations.

I believe the mass of the medical profession is chagrined at this state of affairs, the general public amused, and our prestige lessened, by the spectacle presented in Court of direct contradiction in the evidence presented by two supposedly equally well informed men, possibly members of the same medical society. It might be the case that the two men are so-called doctors, that is, have a doubtful degree and doubtful standing; or again a true expert may be opposed by one who talks well and convincingly, yet is in fact an incompetent. The laity does not take these facts into consideration and frequently the jury does not also, and he who styles himself "Doctor" is such in their eyes. The general practitioner who is cited by the Court, to testify as an expert, because he has a medical degree, often errs through lack of knowledge of

a special branch of medicine, the surface of which he has only scratched, yet his testimony might be given greater weight than that of the witness with true knowledge. These things occur more commonly in trials where the defendant is making a plea involving his sanity. Yet we find this diversity of opinion arising when the question of length of disability, permanency of injury, disfigurement, the aftermath of pain, etc., are being argued.

Is there a remedy for these Court scenes, which are looked upon by many as farcical, because the truth is so often suppressed? I believe so. There is generally a distrust of the expert witness, he being looked upon by many as one whose testimony is shaped by his bias for the party calling him, due partly to the special fee which has been paid, or promised to him, and partly to his prior consultation with the party he testifies for and his self-commitment to a particular view.

To relieve this partisan feature, it is essential that the State, not the party, should be the one to pay the fee and the Court not the party should be the one to select and summon the expert.

In Massachusetts the Briggs law functions well in mental cases. It provides that every person indicted for a capital offense, and every person previously convicted more than once of a felony or of any other offense, who is bound over for trial in a superior court, shall be examined by representatives of the Department of Mental Diseases, and the report of this board shall be filed and accessible to the court, to the district attorney, and to the attorneys for the defense.

As our laws today are framed it would seem that both sides should be permitted to select and bring in their own experts lest there be danger of suppressing possible truth which they might give. But it would seem to me that a law similar to the Briggs might be enacted in Florida, permitting the trial Court—if the experts on either side disagree materially—to employ a third person, that is, a specialist versed in knowledge applicable to the case in hand. The officers of the State Medical Association or the Board of Medical Examiners, or some other stable body, might certify to the Courts the names of physicians and surgeons especially equipped in the various branches of medicine, to act at the summons of the Judge; individuals outstanding in their line, above purchase, cool, keen and mentally active, whose behavior under cross-examination would excite respect and not mirth. The State should pay the expert's special fee. If a clash of opinions should

arise between the opposing experts, the jury would undoubtedly look for guidance to this judge selected impartial expert witness.

How successful this type of measure can be when intelligently and conscientiously administered has been demonstrated in one field, mental, in a number of states, where laws similar to the Briggs law of Massachusetts is in force. Wigmore in his treatise on evidence states "that the legislative progress in the administration of this type of procedure has always been slow, but it is inevitably the way of the future."

CYSTOCELE AND RECTOCELE REPAIR*

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In bringing to your attention this important phase of gynecological surgery, there is a feeling of reticence, both because of the vastness of the subject which must necessarily be limited and the lack of originality. The techniques involved deal only with repair in women of the child-bearing age and are ably taught by Dr. Geo. Gray Ward.

The competent treatment of gynecological lesions must be based upon understanding of the pelvic anatomy, its fascias and ligaments. The pelvic outlet is bounded anteriorly by the symphysis pubis, posteriorly by the tip of the coccyx, and laterally by the rami of the pubis and ischia and the great sacrosciatic ligaments. The pelvic floor is composed principally of two distinct layers of muscles. The upper layer is a broad muscular sheet—levator ani and coccygeus muscles—and forms the pelvic diaphragm. The inferior layer is made up of the transverse perinei muscles superficialis and profundus, the bulbocavernosus, the ischiocavernosus and constrictor urethrae muscles, together with the fibers of the levator ani which are adjacent to the lateral walls of the vagina and rectum, and forms the urogenital diaphragm.

The levator ani is composed of two separate muscles. The external muscle, or ileococcygeus, arising from the rami of the pubis and pelvic fascia as far as the edge of the great sacrosciatic notch, inserts into the coccyx and anococcygeal raphe while its fibers from the two sides decussate with one another in the space between the anus and coccyx. The internal muscle, or pubococcygeus, arising from the fascia behind the symphysis pubis and rami of the pubis and from the obturator fascia is inserted in three parts, viz: the

outer and upper third is attached to the coccyx and sacrum; the middle third decussates with fellow fibers from the opposite side to form a sphincter which suspends the rectum to the symphysis pubis and is the only portion of the muscle effective in lifting the rectum; and the lower and innermost third passes along the lateral wall of the vagina without insertion to join the longitudinal fibers of the rectum and the sphincter ani externus both by direct union and decussation in the space between rectum and vagina, acting directly with its fellow muscle as a constrictor of the vagina. This sphincter action is of great importance during labor and should be carefully reunited in the midline in repairing injuries.

The levator ani muscle is covered above by a layer of fascia which completely covers the pelvic floor except where penetrated by openings of the

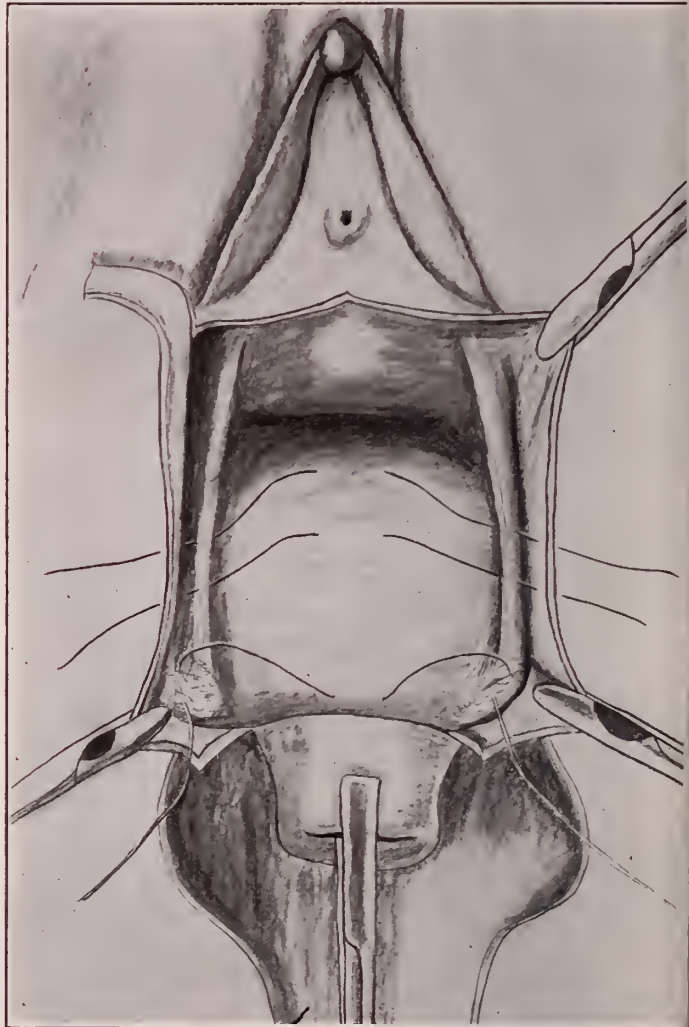


FIG. 1. Dissection of utero-pubic fascia. "Pillars of Bladder" are on both sides. Angulation sutures are shown throughout their course dotted lines. When tied, the antero-posterior length of bladder base shortened. Suture in bases of broad ligaments reefs them over ce

*Read before the 4th Annual Meeting of the East Coast Medical Association, Melbourne, Oct. 2, 3, 1930.

urethra, vagina and rectum. Its lower surface is also covered by fascia which extends backward to the ano-coccygeal raphe. Along the free border of the levator ani muscle at the side of the vagina, the superior and inferior layers of the fascia unite and pass directly in front of rectum to become continuous with the similar fascia of the opposite side. Injury to the fascia at this point results in a rectocele and to correct such a defect must be reunited.

The urogenital diaphragm is made up of two strong fascial bands attached in front and laterally to the pubis and ischiopubic rami and joined behind at their free margins. The superficial fascia of Colles is attached on each side of the ischiopubic rami as far as the ischial tuberosity and fuses with the posterior border of the urogenital diaphragm.

Above these two fascial and muscular floors lies a third plane of tissue made up of smooth muscle tissue arising from the obturator fascias and inserted into the sides of the uterus, anteriorly attached to the cervix, and posteriorly forming the uterosacral ligaments.

The bladder is supported by the uteropubic fascia and the anterior vaginal wall and suspended by the ligaments and connective tissue holding it by attachments to the uterus and the pelvic structures. The anterior vaginal wall is fixed by its attachment to the pubis in front and cervix and base of broad ligaments behind. The pubic attachment is very firm and practically never yields, whereas, the chief supports of the uterus, the bases of the broad ligaments and the uterosacral ligaments stretch and so failing to support the organ results in a prolapse of the bladder. In another type the attachment of the anterior vaginal wall to the upper portion of the cervix is torn away during labor. This creates a weak spot and through this median line tear in front of the cervix develops a hernia of the bladder. The prolonged dragging on the base of bladder and the anterior vaginal wall as caused by a prolapse, produces a definite increase in the antero-posterior length of 10 to 11 centimeters as against 6 to 7 in the parous woman with uninjured structures. This increase in antero-posterior length is of great importance in the correction of cystocele. As a cystocele increases in size the fibers of the uteropubic fascia become frayed and separated in the midline, finally resulting in a thinning of the vaginal wall and the increase in the transverse dimensions of the vagina and bladder base. This lateral increase is of less importance than antero-pos-

terior, although most operative techniques lay more stress upon its correction. If prolapse accompanies the cystocele, a uterine retro-displacement must be done at the same time.

The operative procedure used in the repair of the cystocele may be said to be a combination of techniques used by Hadra, Goffe, Martin, Franks, Alexander and Sims, which accomplishes a reduction of the hernia, replacement of its supports by overcorrection, removal of excessive bladder base, both antero-posteriorly as well as laterally, and the elevation and anteversion of the uterus. This technique is as described by Ward of the Woman's Hospital, New York.



FIG. 2. Diagrammatic sketch showing attachment of bladder to uterus and shortening of antero-posterior length of bladder base when angiotomy sutures are tied.

A transverse incision is made on the anterior vaginal wall at its junction with the cervix sufficiently wide to lay bare the bases of the broad ligaments. The line of cleavage is then found between the bladder and vaginal wall. Perpendicular to this incision the anterior vaginal wall is cut by scissors one-half inch from urethra. Near the urethra the wall and bladder are not widely separated in order that vaginal wall may exert traction on the bladder base. Excessive vaginal wall is trimmed away (Fig. 1). The uteropubic fascia will be found on either side firmly attached to the vaginal wall and bladder, with its terminal attachments to the lateral wall of cervix and base of broad ligaments behind and the posterior surface of the symphysis pubis in front.

This fascia is next dissected free from each half of the anterior vaginal wall but taking care not to detach it from the bladder surface. By putting traction on the margins of the vaginal walls and making an incision with scalpel about 0.5 centimeter from its edge, just through fascia, it can easily be stripped back by blunt dissection from its vaginal attachments. Next the bladder is carefully separated from the cervix by use of blunt scissors, keeping close to the cervix to avoid injury to the bladder. After a line of cleavage is found, the gauze covered finger pushes the bladder up until it is entirely free from the uterus. The bladder wall is picked up with forceps in the midline at such a point that when it is carried up on the surface of the uterus above the internal os, the base of the bladder is straightened out and the herniation reduced (Fig 2). At this point the bladder is sutured to the anterior surface of the uterus with one to three catgut sutures.

Two catgut sutures are then placed through the trimmed vaginal wall and the uteropubic fascia of the same side and through the uterine wall above the internal os just below the attachment of the bladder, and out through the fascial and vaginal margins of the opposite side. When tied, these sutures completely straighten out the slack in the anterior vaginal wall and by the angulation correct the excessive length. The bases of the broad ligaments are thoroughly exposed. Under guidance of a finger hooked under the ligament, a catgut ligature in the form of a mattress suture is placed well out from the side through the strong lower portion of the ligament below the vessels and ureters, is passed through the lower end of the cervix in the midline; and ends as a similar mattress suture in the opposite broad ligament base. When tied, this suture reefs the base of the broad ligaments across the lower end of the uterus, throwing it backward and upward. After these three sutures are passed and before they are tied, a continuous suture approximates the margins of the uteropubic fascia under the bladder. Then the angulation sutures and the mattress suture are tied and the remainder of the vaginal incision closed by interrupted catgut sutures. If there is a tendency to oozing, a rubber tissue drain should be inserted on each side of the line of sutures.

By means of this technique the following points have been accomplished:

1. The bladder has been mobilized and elevated with a firm fixation to the uterine wall.

2. The excessive bladder base has been disposed of both laterally and anteroposteriorly.

3. The normal attachment of the vaginal wall has been accomplished with the obliteration of the weak point.

4. The attachment of the uteropubic ligaments and the vaginal wall above the pivotal point of the uterine wall overcorrects the hernia and insures anteversion of the uterus.

5. Uterine prolapse and retrodisplacement has been corrected by reefing the bases of the broad ligaments over the cervix.

The conditions in a rectocele are similar to cystocele in that both are due to injury of fascial supports and are increased by patency of the vaginal orifice following injury. In rectocele there is a true hernia or prolapse of the rectum. This takes place through the torn fascia which

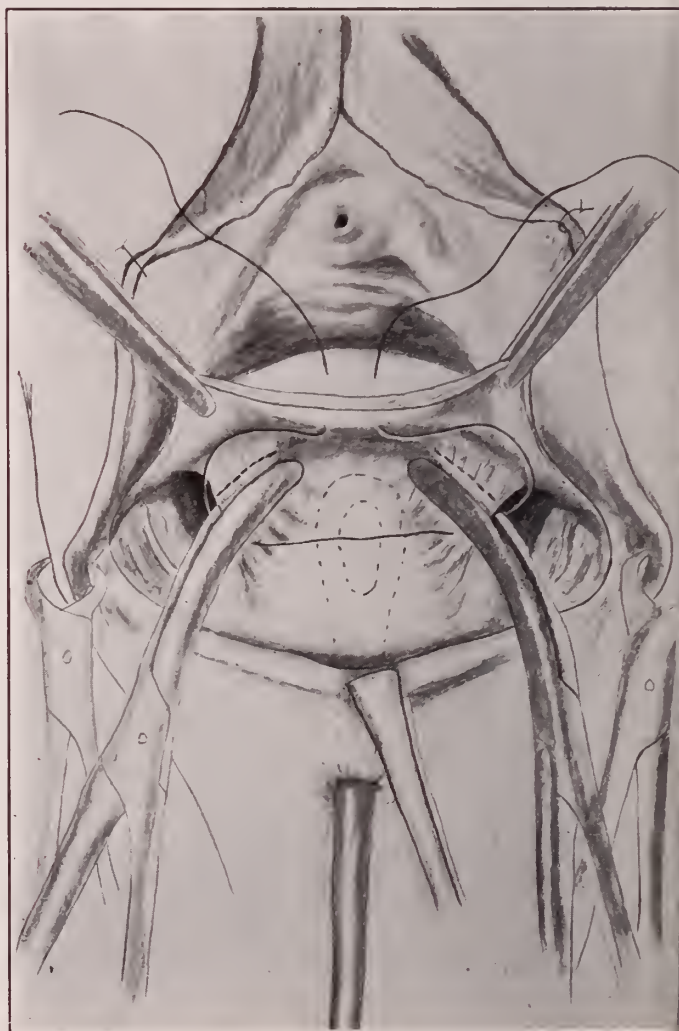


FIG. 3. Showing dissection of fascial bands attached to lateral vaginal sulci and placing of suture to obliterate hernial defect. Levator muscles may be seen on either side of perineal floor.

fused to pass over the anterior surface of the rectum. Any corrective process must take into consideration this fascia in its repair. Closure of the perineal orifice is necessary but not wholly satisfactory. Reefing over the enlarged bowel will not be sufficient. Just as in hernia in any other part of the body so here the fascial defect must be repaired.

The following technique as described by Ward seems to meet this requirement most satisfactorily,—a gauze sponge on a sponge forcep is inserted into the rectum to outline better the defect and act as a guide. A suitable vaginal retractor catches each posterior caruncle just below the orifices of Bartholin's glands. An Allis forcep catches the posterior vaginal wall in the midline at the crest of the rectocele. After putting traction on these three points the excessive vaginal mucosa is outlined by scalpel markings to more easily facilitate its later removal. With blunt scissors the base of the triangle is dissected free from side to side at the muco-cutaneous junction. By blunt dissection the gauze covered finger opens up the line of cleavage between the side of the rectum and the levator muscle on both sides. This is separated deeply, exposing freely the anterior fibers of the levator. Then the rectum is separated from the posterior vaginal wall in the midline well above the rectocele. The layers of torn fascia are attached to the sides of the rectum and the under surface of the vaginal sulci and when separated as above forms partitions which divide the area into three distinct spaces. Curved clamps are placed close to the vaginal surface and upward about 1.5 centimeters and the fascia cut free from its vaginal attachment.

A No. 2 catgut suture is placed through the vaginal wall in the midline well above the rectocele, is brought down between vagina and rectum, passed through the lower margin of the clamped fascial stump across through the margin of the opposite fascial stump, and back out through the vaginal wall near its origin (Fig. 3). When this suture is tightened and tied the denuded mobile rectum is carried up well beyond the previous fascial defect where it will adhere firmly to the undamaged upper third of the vagina.

The previously outlined dilated part of the vaginal wall is trimmed away and its cut edges approximated with chromic catgut, being sure the upper sutures include the fascial stumps in order to thoroughly obliterate all dead space. The margins of the levators are grasped and drawn

to the midline and sutured with interrupted chromic catgut No. 2, so forming a strong support to the pelvic floor. The edges of Colles fascia are sutured together with continuous chromic catgut No. 1, being sure to include the margins of the levator fascia and portions of the fused urogenital diaphragm. It is tied at its lower end and left long to tie to the subcuticular suture. The skin is approximated with No. 1 chromic catgut on a fine needle and tied to fascial suture.

By means of this technique the herniating rectum has been replaced above the site of injury, the fascia securely closed over it, and the perineal structures anatomically replaced.

In many cases it may be necessary to further safeguard the corrective process by abdominal procedures as seem justified in the individual case. No set rule can be made, nor any one procedure outlined which will cover the needs of the individual case. After all the surgeon's greatest virtue should be his judgment.

FRACTURE OF THE GREATER CORNU OF THE HYOID BONE—PERFORATION OF THE PHARYNX.

CASE REPORT*

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Tampa.

COMPLAINT

I. B., male, age 42 years. One evening while eating the evening meal, swallowed a piece of roast beef and a bone lodged in the throat on the left side, causing him immediate discomfort and pain. He expectorated a small amount of blood at this time and the pain became intense. He put his finger down his throat and felt the bone but could not dislodge it. He immediately went to a small hospital in the neighborhood where physicians worked two hours in an effort to remove the bone. They finally told him to return in the morning and that they would etherize him and remove it. Instead of doing this, however, he was referred to my office the following day.

I found an undernourished male of middle age, apparently in very severe pain, holding the left side of his neck, drooling saliva, and having much difficulty with deglutition. His temperature and pulse were normal.

An upper pharyngeal examination was negative. In the lower portion of the oro-pharynx on the left lateral wall, posteriorly, there was an area

*Read before the Hillsborough County Medical Society, 1929.

of edema with considerable membranous exudate. A digital examination disclosed a large, smooth, bony surface that could be elevated by getting posterior to it and making traction toward the midline. It was very firmly attached and I became immediately suspicious of this being a tip of the hyoid bone. I again elevated it with my finger inside the pharynx and at the same time by external palpation with the other hand discovered that the body of the hyoid bone moved and that the tip of the greater cornu on the right moved forward simultaneously. The patient was so thin that the whole hyoid bone could be made out through the pharyngeal wall.

Radiographs made by Dr. J. C. Dickenson showed a fracture of the left wing of the hyoid bone about 1.5 centimeters from its tip. There was no evidence of displacement of the fragments.

A direct pharyngoscopy was done and with a little traction the tip of the cornu could be seen in the pharynx, and a small area anterior to this along the cornu. I thought that I could detect the fracture line but was not certain of this.

The area was thoroughly cleansed. No effort was made to close the lacerated pharynx. The bone was put back into its bed and with that the edges of the wound approximated fairly well.

The patient was placed in bed on a liquid diet with various mouth washes, an ice collar, etc. All pain disappeared on the fourth day and no adenopathy developed on this side. Temperature was never above normal. One week after the accident, no evidence of a pharyngeal wound could be made out on mirror examination. On digital palpation, the tip of the greater cornu of the hyoid bone on the left side could be made out through the pharyngeal wall more clearly than on the other side.

There are several rather interesting points in this case report:

1. Patient was sure that he had a foreign body in throat. He even claimed to have felt it with his finger.

2. Attempts at removal of the supposed foreign body were made for two hours.

My impression is that the perforation of the pharynx and the fracture of the hyoid bone were caused by manipulations in the attempted removal. The patient and the physicians felt the hyoid bone through the pharyngeal wall and mistook it for a foreign body.

It was unfortunate that we did not have the stools carefully examined to see if he really swallowed a bone.

PERFORATED GASTRIC AND DUODENAL ULCERS*

EUGENE G. PEEK, M.D.,
Ocala.

HISTORY

The first description of the pathology of gastric ulcer was published by Ballie, 1793, but did not stimulate interest as it was not accompanied by clinical data. In 1824, Aberconombie described ulcer, though he did not differentiate it from ulcerated carcinoma. Between 1829 and 1839 Cruveilhier first recognized and described the clinical course and treatment of ulcer and carcinoma. In 1885, Dr. William Welch wrote and published his paper, "Simple Ulcer of the Stomach," at which time there was much literature on the subject by such men as Gatch, Budd, Chambers, Fox, and many others. The development of surgical technique has increased greatly the surgical treatment, as well as the pathological findings of ulcer.

The surgical treatment of ulcer began in 1881. A plastic operation on the pylorus was first performed by Heineke in 1886. From then until the present time, there has been a very rapid development of the surgical aspect of ulcer. Some of our best surgeons are advancing ideas of their own, as to better methods of surgical interference of ulcer.

INCIDENCE

The frequency of gastric ulcer is based on occurrence found at autopsy. Some give from 4% to 5% while some as low as 1%. Data from Baltimore and New York of over 60,000 autopsy records show 4.4%. Mayo and Reed claim that duodenal ulcer occurs about three times as frequently as gastric ulcer.

PATHOGENESIS

The theories of the cause of ulcer are various. Among the most important are: inflammatory theory; neurogenic theory; circulatory theory; bacterial theory; and digestive or corrosive theory.

Complications may be listed as follows: cicatricial contraction; perforation; hemorrhage; and malignant transformation.

DISCUSSION

Of these, I wish to discuss perforation of gastric or duodenal ulcer. It is estimated that about 12% to 28% of gastric or duodenal ulcers perforate. In the U. S. Army records of 496 cases the percentage was 8.87 for a four-year period.

*Read before the Central Florida Medical Society, Leesburg, February 20, 1931.

In the U. S. Army in Hawaii, the record showed about 33.3% of perforations, probably due to change of environment, homesickness, mental depression, smoking and drinking. Finley claims 28% of perforations and 7% of deaths. Perforations occur more in men than women. They occur most frequently during active life—25 to 45 years—though, of course, they will be found at almost any age from 20 years to old age.

They happen more often when the stomach is full, and also during strain, although have been known to occur during sleep.

DIAGNOSIS

I feel sure this is the most important part of this paper, not only to the surgeons, but to all physicians. This is especially true because perforation is a curable condition and its cure depends on its early recognition.

In all cases, the onset is very sudden and very severe. Few conditions, if any, give rise to such agony as a ruptured duodenal ulcer. The appearance of a patient suffering from excruciating, constant abdominal pain and exhibiting board-like rigidity of the abdominal muscles should make us suspicious. Rigidity with pain that can be only slightly relieved with morphine is the first symptom that meets the physician. The pain may not only be felt in the epigastrium but may be equally severe in the right shoulder, especially in the case of a ruptured duodenal ulcer. This may be a "distant phrenic nerve symptom" due to irritation of the phrenic nerve, the result of material escaping into the subphrenic space. This is Stohr's Theory.

The patient cannot take a deep inspiration. He is covered with cold perspiration; avoids examination of abdomen, if possible. There is very little shock in the beginning; the pulse generally remains full and strong; there is vomiting in about 25% of cases. The blood picture shows an increase in the white count. The urinary findings seem to aid in diagnosis but very little, if any.

X-ray would be quite an aid in diagnosis, but time is too valuable, and the manipulation of the patient might increase damage. The previous history of so-called "heart burn," taking soda after meals, and the symptoms of gastric disturbance is important, but you get this only in a small percentage of patients.

TREATMENT

John B. Deaver says: "Get them early and you will get them well." Immediate surgery is the

only means to adopt. An upper right rectus incision is the one I use, exposing all parts to be examined. After locating the rupture, close with purse string suture, if possible, or use cautery and close with sutures through seromuscular coats. Last, cover closure with omentum. I feel that all cases should have drainage. Post-operative treatment is the same as treatment of ulcer.

TRAUMATIC INFECTIONS*

R. O. LYELL, M.D.,
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This subject is worthy of our consideration inasmuch as the surgeon's services to the railroads are principally for trauma and its complications. The serious complication is infection and it behooves us to give prompt, judicious and diligent service to prevent loss of time, loss of limb, and even loss of the life of the patient. An overlooked miniature puncture of the skin might result in septicemia, an osteomyelitis or tetanus. A break in the skin means contamination if not infection and should be treated accordingly. A small percentage of contaminated and infected wounds advance to a degree of seriousness when ordinary first aid is given. Fortunately, and of most importance, we have immunity on the part of the patient to combat infection; we have also lack of virulence, usually, on the part of bacteria, and then we have the surgeon's preventive care.

The pathology of traumatic infections will be considered under macroscopic and microscopic findings.

Infection, or the degree of infection, is influenced or encouraged by certain local conditions such as foreign bodies, filth and hematoma within the wound, the state of the tissues, whether contused, lacerated, macerated or devitalized, and from faulty blood supply as when vessels are traumatized or pressure exists as from hematoma within the wound or swelling of the tissues. The extent of pathology or trauma varies from crushed limbs and compound fractures to small abrasions, cuts, punctures and lacerations. The extent of infection varies from slight redness, swelling and sero-purulent discharge to extensive swelling, induration, abscess formation, sloughing of tissues and lymphangitis, and at times systematic infections with metastatic abscesses scattered over the body, or to an infectious embolus to the lungs.

*Read before the Twelfth Annual Meeting of the Florida Railway Surgeons' Assn., Orlando, May 11, 1931.

Macroscopic evidences of infections are first seen, three to five days after the infection takes place in swelling, induration, redness, increase in local temperature, possibly a purulent discharge, red lines extending up the limb when lymphangitis exists, and proximal lymphatic glandular enlargement may be looked for.

Microscopic examination at this stage will show infiltration of tissues, dilated vessels, purulent discharge and leucocytosis. The bacteria most commonly found are the staphylococci, but the streptococci and bacilli are common. A mixed infection of many varieties of organisms as well as many strains of each organism may be looked for. Anaerobic organisms are occasionally present.

The sources of organisms of infection are chiefly the skin or mucous membrane and contaminated foreign bodies that produce the trauma. But contamination of the wound also takes place from soiled clothing and the soil or dust or other foreign substances with which the wound comes in contact.

The course of infection varies in time and severity inasmuch as the immunity of the patients differ, the virulence of the organisms differ and the variety of organisms vary. In most favorable cases the inflamed area is quite limited and evidences of infection disappear in seven to ten days. If suppuration takes place, pus, bacteria, foreign substances and sloughing tissues are thrown off in one to two weeks and healing takes place by granulation. At times the infection extends deeper and deeper and into surrounding tissues either as cellulitis or as an active inflammatory process and even may advance to the formation of multiple abscesses. Infection may become still more extensive and involve the entire body, producing septicemia, bacteremia, multiple metastatic abscesses or may involve the lungs by a septic thrombosis, the bacteria gaining entrance into the circulation either through the lymphatic system or through the infected blood in the vessels.

Of most importance in the treatment of traumatic infections, is the preventive treatment which will be considered under the following headings: cleansing, antiseptics, caustics, rest and position, serological and surgical.

While cleansing by scrubbing with green soap and water and the application of antiseptics are important, we have learned from experience that this is not dependable. Infectious organisms may

be imbedded in the tissues and beyond the reach of either. Exposure to light and drying also fails to be adequate.

Caustics, such as silver-nitrate, nitric acid and trichloroacetic acid will destroy the organisms along with a superficial layer of the tissue but this treatment is not desirable as it necessitates much delay in sloughing and healing by granulation. Even with this treatment there is the uncertainty of having reached all of the pockets of contaminated tissues. Caustics, however, are indicated in certain superficial wounds when treated promptly.

Rest and position are of much value, rest favoring the resistance of the tissues to the infection, and promoting more rapid healing. Elevation of the limb involved favors the circulation and consequently better results are obtained. If impossible to take the rest and have the elevated position, an elastic supportive bandage will do much to facilitate healing.

The value of antitoxins for the prevention of tetanus have long been recognized and more recently, the antitoxins for gas-gangrene have been used rather extensively and effectively. Immunizing doses of tetanus antitoxin should always be given if the skin is punctured or lacerated. Immunizing doses of combined tetanus and gas gangrene antitoxin should be given if the deeper tissues are involved and especially is this true if the muscle tissue is macerated.

Should tetanus or gas-gangrene develop, this line of treatment should be used as a curative measure, as a large percentage of cures are reported.

Surgery is essential in all cases of extensive trauma such as compound fractures, deep cuts and extensive lacerations. Surgical procedures are indicated for thorough removal of filth, foreign bodies and hematoma; for removal of ragged macerated or devitalized tissue or tissue that might become devitalized; for the ligation of bleeding vessels; for the repair of fractured bones, tendons, and nerves; for thorough disinfection and for the placing of Dakin's tubes when this line of treatment is indicated. Where the wound is contaminated, a thin layer of the tissue should be cut away, if possible, to spare the tissue. This enables you to get rid of the infection and at the same time get a clean-cut surface for primary healing.

You are always justified in doing an open reduction in compound fractures and in opening

up and exposing all deep cuts and lacerations. When Dakin's tubes are not used, rubber tissue drainage should be established for five to seven days. In closing these deep wounds, use as few stitches as possible. Use these interruptedly, and tie just tight enough for apposition. Dakin's tubes are indicated in all compound fractures and should be placed around fractured bone areas and in all pockets in order that more complete and continuous antiseptic treatment may be carried out.

After the preventive treatment for traumatic infection has been rendered, the care is of an expectant nature. All drainage cases should be redressed daily. Non-drainage cases should be dressed in four to six days or sooner if wound becomes painful or if the patient's temperature becomes elevated. Should there be evidence of infection, a probe should be passed into the line of incision and drainage established, if necessary. One or more interrupted sutures should be removed if free drainage is indicated.

MEETING OF THE FLORIDA DERMATOLOGICAL ASSOCIATION

The Florida Dermatological Association, of which Dr. Elmo D. French of Miami is chairman and Dr. J. F. Wilson, Jacksonville, secretary, held its quarterly meeting in Miami, February 8, 1931. The following proceedings have been forwarded to us by Dr. J. F. Wilson, secretary:

PROCEEDINGS OF MIAMI MEETING

Dr. Fred Wise, New York City, Dr. F. W. Gregor, Indianapolis, member of Judicial Council American Medical Association and Dr. Rothwell Lesholtz, Miami, were guests at the meeting.

The following was proposed by Dr. C. A. Andrews and adopted for the future as an outline for presentation of cases at the regular meetings:

Initials:	Color:
Nationality:	Age:
Sex:	Occupation:

History: (Brief history containing only facts pertinent to present condition).

Duration of Dermatosiis:

Distribution:

Description of Dermatosiis: (Make this detailed and accurate so that a *reader* can get a clear idea of the picture).

Laboratory Findings:

Treatment and Results:

Diagnosis: (Make some diagnosis in every case).

Point of Presentation:

Exhibitor:

Dr. Elmo D. French, Miami, then presented the following case reports:

ACHROMIA PARASITICA

C. E. J., an American white boy, aged 6 years, first showed symptoms of his present eruption five months ago on the back of the hands, wrists and the face. Two other children, aged 2 years and 8 years, were not affected.

The eruption consisted of disseminate pea to nummular sized macules which were round to oval in contour, nonelevated, noninflammatory and achromatic. The lesions on the wrists showed fine scaliness but no scaliness was perceptible on the face. There were no symptoms. Neither mycelia nor spores were found in a slide examination.

This condition is seen with some frequency in southern Florida and especially in children.

DISCUSSION

Dr. C. A. Andrews, Tampa, regarded the eruption as eczema.

Dr. F. W. Gregor, Indianapolis, Indiana, (by invitation) thought it was eczema of the seborrheic type; the scalp was scaly.

Dr. Fred Wise, New York City, (by invitation) thought that there may have been both eczema and a parasitic achromia in this case.

Dr. J. L. Kirby-Smith, Jacksonville, said that achromia parasitaria, or as Pardo-Costello termed it, leucoderma parasitica, is marked by a more pronounced depigmentation. He considered this to be a case of dermatitis. The lesions were elevated and erythematous in places.

Dr. J. J. Saxton, Tampa, said he considered the eruption a mild dermatitis.

LUPUS ERYTHEMATOSUS

(Presented by Dr. French)

Mrs. P. S., an American housewife, aged 33 years, three years ago noticed a small inflammatory scaly spot on the left side of the nose which has steadily enlarged to its present size and after a treatment with ultra-violet light two years ago a second lesion appeared on the left cheek.

There is a lesion on the left side of the nose extending to the cheek 3 cm. x 1½ cm., and another circular lesion 1 cm. in diameter over the left malar region.

Both lesions are light red at the borders with

tenacious scales, pustulous follicles and atrophic centers.

She states that four injections of a gold preparation have been given accompanied by X-ray exposures locally, with some improvement.

DISCUSSION

Dr. C. A. Andrews said he thought this an ideal case for orthodox treatment.

Dr. Gregor (by invitation) called attention to the use of *sapo mollis*, U. S. P., applied with a flannel cloth two or three times a day and followed by an emollient or a glycerine, phenol and powder lotion as a very useful adjunct to treatment. It pleases the patient because it removes the scales. He had also obtained some good results with the Hollander treatment, giving quinine, ten grains internally, followed in fifteen minutes by iodine locally.

Dr. E. D. French said that in times past he had thought there was some relief of the local congestion through the internal use of ichthyol or iodoform, a method advocated by Dr. O. S. Ormsby.

Dr. J. L. Kirby-Smith said that the tonsils and teeth should be especially examined for disease foci.

Dr. R. Lefholtz, Miami, said that the tonsils had been removed and the teeth appeared sound. Dr. Fred Wise (by invitation) said that in Copenhagen they use the gold chloride—it is cheaper and with prolonged use the results are good. Whitehouse, years ago, used iodoform internally with questionable results, ultimately preferring cryotherapy or erasive methods. The Hollander treatment is usually only palliative. At times there is no response with gold treatment and sometimes it exaggerates the condition, new lesions appearing. There is no explanation for this. A biopsy may be required to differentiate between a new area of lupus erythematosus and a dermatitis medicamentosa caused by the gold solution. MacKee at one time advocated 100 even up to 150 injections in obstinate cases without dermatitis medicamentosa. Jadassohn and Block advocated silver arsphenamine in resistant cases, continuing later the gold, also they change the preparation at times using "triphal," a German formula, or some other preparation. It is generally agreed that we should begin treatment with 10 mg. doses and not increase the dose unless conditions justify an increase.

Dr. Kirby-Smith said that locally the X-ray is useless and sometimes the carbon dioxide snow causes a too severe reaction. We at times use

ethyl chloride by preference. Of course we use gold intravenously.

Dr. Andrews asked what the present opinion is as to the part played by foci of infection, as diseased tonsils for example.

Dr. Fred Wise replied that the etiology is variable and may be caused from foci of infection due to various and many different bacteria. The tubercle bacillus is only one of many. The eradication of focal infections may be the main therapeutic factor, although Europeans do not accept this view in the same light as do Americans.

DERMATOPHYTID

(Presented by Dr. French)

Mr. L. S., an American white salesman, aged 28 years, had a few "blisters" on his hands which became much more numerous after washing his clothes with "flake" soap three weeks ago. He has had similar attacks for six years usually in the fall or spring. As a child he had eczema and usually "hay fever" beginning in August. Tests in 1926 showed sensitivity to rag weed.

At this time the dorsa of the hands are edematous and covered with a pin head to pea sized vesicular eruption, the palms being only slightly affected. The trunk and limbs are free of any lesions but examination of the feet revealed distorted, hypertrophic nails with subungual thickening and interdigital macerated moist patches.

DISCUSSION

Dr. C. A. Andrews said that these cases are more usual in summer months.

Dr. R. Lefholtz said, "We are seeing a number at this time."

Dr. Fred Wise (by invitation) said that in New York we see a number of cases in the winter as well as the summer, possibly because of heated apartments. Sulzberger has performed the tricophytin skin test in many cases of this disease. In a large percentage of the cases with an eruption on the palms we will see the disease between the toes and in such cases the tricophytin test is nearly 100 per cent positive. In dermatitis venenata, common to carpenters, painters, textile workers, etc., where there is no involvement between the toes, the tricophytin test will be negative, and therefore might be a useful biological differential test between ringworm and dermatitis venenata. Puzzling cases have both diseases coincidently. Immunization experiments are being carried on by Sulzberger and others.

Dr. French inquired in what way the tricophytin

test would be of value in a community where a very large percentage of people gave evidence of ringworm foci.

Dr. Fred Wise replied that it is of value in some ringworm cases because of the variability in the grade and intensity of the skin reaction. In active cases the reaction is very decided in 24 to 48 hours. In a community infested with ringworm it is of like value.

Dr. F. W. Cregor said that in mycotic infections many eruptions become eczematous because of too vigorous treatment. Mild therapy gets results. We must have full cooperation from the patient.

Dr. Wise said that in the secondary hand lesions we do not destroy ringworm organisms with the treatment because in the dermatophytids there are no organisms, as a rule. The fungi are in the focal point of infection. Peck of New York demonstrated in Block's clinic that treatment of the primary infection between the toes ultimately cures the eruption on the hands. The foci remain in abeyance sometimes for months but stimulating them may cause a "flare up" of the hand lesions. I agree with Dr. Cregor that many cases are probably over treated.

DERMATOMYCOSIS (VERRUCOUS TYPE)

(Presented by Dr. French)

Mrs. M. M., a Jewish housewife, aged 71 years, twelve years ago first noticed an eruption on the knees which slowly extended upward to the buttocks and down to the ankles. The hands were involved at the time but have since healed. From the waist line to the ankles and chiefly on the anterolateral surface are a number of keratotic papules and verrucous plaques, varying from pea sized on the thighs to that of a silver dollar below the knees and on the ankles. The skin in the affected area is pigmented and thickened, with areas of depigmentation, secondary crusts and depigmentation.

The individual plaques are void or irregular in outline, elevated, bluish black in color, lichenified and with dilated follicles but not scaly.

There has been about 50 per cent improvement with Whitfield's ointment.

DISCUSSION

Dr. Fred Wise inquired on what grounds Dr. French made the diagnosis, "dermatomycosis" in this case? There was no eruption between the toes and his diagnosis was eczema of the chronic inflammatory, exuding type. It was a good case for the trichophyton test. He would suggest rest

in bed with the legs elevated as essential toward cure, with wet dressings of Burrow's solution 1 to 10, for two weeks, followed by Unna's gelatine zinc paste as a permanent dressing for three or four days which was to be removed by the physician. The X-ray treatment was a help in these chronic cases.

Dr. F. W. Cregor thought the eruption to be Duhring's disease and suggested both the iodide test and the trichophyton test.

Dr. J. L. Kirby-Smith inquired whether there was glucosuria.

Dr. French replied that there was none.

Dr. Fred Wise mentioned the fact that the iodide test is positive in Duhring's disease and is done by an application of 10 per cent ointment of potassium iodide. It is negative in pemphigus.

PSORIASIS

(Presented by Dr. French)

Mrs. W. G., 37 years of age, a white American waitress, had the usual diseases of childhood and her present trouble began early in childhood. There is no history of repeated sore throat or joint pains. The scalp is practically covered with tenacious silvery scales. There is no alopecia.

On the medial surface of the forearms, the antero-lateral surface of the legs, and disseminated over the sides of the torax, are pea to nummular sized, slightly elevated lesions, the majority presenting a glazed erythematous surface and others topped by fine silvery, micaceous scales.

The case is presented because of the extent of the scalp involvement.

DISCUSSION

Dr. Fred Wise said that female patients with psoriasis of the scalp do not cooperate with the doctor. Europeans put them into the hospital. Poulticing the scalp with salicylated oil followed by 10 per cent ammoniated mercury ointment would clear this girl's scalp.

Dr. F. W. Cregor said that if you tell a patient, even though there is no cure, the disease can be controlled, they will come back to you.

Dr. C. A. Andrews said that he used Goeckerman's treatment with excellent results.

Dr. F. W. Cregor said that he dispensed all his drugs and made up his own tar ointment.

ECZEMA

(Presented by Dr. French)

Mr. C. H. R., aged 77 years, is a white American farmer and has had "eczema" as long as he can remember.

For a number of years there has been an itching thickened patch on the left ankle. Shortly after applying a strong ointment to this patch he "broke out all over" with an intense itching eruption.

At this time there is a generalized, erythematous, confluent eruption with lichenification in the flexures and a very much thickened lichenification of the left ankle.

He is presented as a case of probable hypersensitiveness to exogenous irritants.

DISCUSSION

Dr. Fred Wise said that the "patch" test as described in Sulzberger's articles could be used here to great advantage, bearing in mind the many different materials the farmer uses in his business. The test requires time and patience but sometimes leads to a definite conclusion as to etiology.

In the test small lint squares are soaked in a suspected solution, applied to the normal appearing skin and the effect noted 24 hours later.

Dr. C. A. Andrews said he presented a case of this type in Tampa at their last meeting. By a process of elimination, an arsenic spray was found to be causative.

A CASE FOR DIAGNOSIS (MALIGNANCY?)

(Presented by Dr. French)

Mrs. T. L. T., aged 71 years, a widow, unemployed, developed a painful "pimple" on the ball of the right foot one and one-half years ago. Burning pain was experienced and she thought there was a "splinter in the flesh." Her physician reported her blood as "negative" and caused the condition to disappear on several occasions by use of the cautery and the X-ray.

At this time extending in a linear manner, are several verrucous papules, situated on a fissured, indurated base which is exuding serum. On the dorsum of the second toe and in the interdigital surface are several new papules which are pea sized, scaly, of firm consistency and situated on an inflamed indurated base.

DISCUSSION

Dr. J. L. Kirby-Smith considered the diagnosis to be sarcoma cutis probably of the Kaposi type.

Dr. Fred Wise agreed with the diagnosis of sarcoma, of a relatively benign type. There were three diseases to be considered here: sarcoma, Kaposi's sarcoma and Angiokeratoma of Mibelli.

He would eliminate the last because it usually

affected the lateral surface of the toes and hands in people susceptible to frost bite. Kaposi's sarcoma was usually bilateral and occurred chiefly on the back, primarily, of the hands and was of a violaceous color. He would suggest this then, to be a slow growing multiple sarcoma. A biopsy was most desirable. At her age he would destroy the lesions under general anesthesia with the high frequency coagulating current, followed by rest in bed and an ichthyol ointment. The outlook was not good.

Dr. F. W. Cregor cautioned against the destruction of the plantar fascia in treatment. Injury to this structure will be a constant reminder to her of her trouble when she puts weight on her foot.

(Subsequent biopsy and course to be reported later.)

VAGINAL PRURITIS, SCLEROSIS AND CARCINOMA

(Presented by Dr. French)

Mrs. H. M., aged 45 years, an American housewife, was first seen by me March 6, 1930.

The skin at that time revealed distributed over the external surfaces of arms and forearms and at the base of the neck an erythematous-papular discrete and confluent coin to 1/2 palm-sized eruption. Midway over the right tibia was a small painful deep-seated nodule. Both knee joints were swollen and tender. There were abraded patches on the tongue and buccal mucous membranes.

Septic absorption was deemed the probable cause and she was sent to the hospital for observation.

The vaginal condition has been refractory to all suggested local treatment. Surgery upon the pelvic organs has been feared because of danger from ascending infection.

Vaginal tenderness and sclerosis, with purulent exudate and an inflamed edematous vaginal mucous membrane persists and there is now a carcinoma of the floor of the vagina.

Bacteriological examination has determined no specific organism in blood stream or vagina.

The case is presented to illustrate the course of long continued vaginal pruritis probably from insufficient drainage of irritant uterine discharges.

DISCUSSION

Vulvectomy was advised by all and hysterectomy in the judgment of the operator.

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SIXTH DISTRICT—J. A. STRICKLAND, M.D. St. Petersburg
Pinellas.

SEVENTH DISTRICT—SAMUEL PULESTON, M.D. Sanford
Brevard, Volusia, Seminole.

EIGHTH DISTRICT—G. C. THILMAN, M.D. Gainesville
Putnam, Levy, Baker, Bradford, Union, Flagler, Alachua.

NINTH DISTRICT—J. M. NIXON, M.D. Panama City
Holmes, Washington, Bay.

TENTH DISTRICT—W. A. WEED, M.D. Lakeland
Polk.

ELEVENTH DISTRICT—R. C. WOODWARD, M.D. Miami
Dade.

TWELFTH DISTRICT—W. H. GRACE, M.D. Ft. Myers
Glades, Charlotte, Hendry, Lee, Collier.

THIRTEENTH DISTRICT—J. W. ALSDORF, M.D. Plant City
Hillsboro.

FOURTEENTH DISTRICT—D. A. MCKINNON, M.D. Marianna
Calhoun, Jackson, Gulf.

FIFTEENTH DISTRICT—LEIGH F. ROBINSON, M.D., Ft. Lauderdale
Palm Beach, Broward.

SIXTEENTH DISTRICT—W. L. ASHTON, M.D. Umatilla
Sumter, Lake.

SEVENTEENTH DISTRICT—MEREDITH MALLORY, M.D. Orlando
Osceola, Orange.

EIGHTEENTH DISTRICT—T. M. McDUFFEE, M.D. Manatee
Manatee, Sarasota.

NINETEENTH DISTRICT—HENRY P. BEVIS, M.D. Arcadia
DeSoto, Hardee, Highlands.

TWENTIETH DISTRICT—WILLIAM R. WARREN, M.D. Key West
Monroe.

TWENTY-FIRST DISTRICT—H. D. CLARK, M.D. Ft. Pierce
St. Lucie, Okeechobee, Indian River, Martin.

SHALL WE HAVE A PRESIDENT-ELECT?

The constitution of the Florida Medical Association provides that it shall have a president and three vice-presidents. The duties of the vice-presidents, as laid down in the by-laws, are to assist the president in the discharge of his duties and, in case of his death, resignation or removal, to succeed him.

It was at one time the custom of the association to elect the retiring first vice-president as the new president for the ensuing year. This prac-

tice has been discontinued for a number of years. It had its advantages and its disadvantages. By a more or less close association with the president, the first vice-president obtained a knowledge of the affairs of the association which was of benefit to him when he became the president. But since his advance to the position of president was not automatic but dependent on another election, the advantages which the Association derived from this practice were always, to some extent, problematical.

It has been suggested by a number of members from time to time that this practice be resumed in a modified form; that at our annual meeting we elect a "president-elect" who shall also be the first vice-president and shall automatically become president at the next annual meeting, at which time the next "president-elect" shall be chosen.

This plan has been adopted by other medical societies and associations and has worked very satisfactorily, apparently. According to the scheme, the president-elect is closely associated with the president in all activities. He attends all committee meetings with the president and may also be made an ex-officio member of these committees. In this way, he obtains a knowledge of organized medicine and the Florida Medical Association, and of the duties appertaining to the office of president. This knowledge will be of great advantage to him when he becomes president and the affairs of our Association will be correspondingly benefited.

It would seem that there are many good points to this plan as thus outlined. However, many things would have to be carefully considered before it could be adopted by our Association. Such a system is entirely against our precedent and the Florida Medical Association has shown frequently in the past that it likes to stick to precedent. Ours is an old Association with a most honorable past. Our system has been successful in the past and radical changes and innovations should not be undertaken without careful consideration of every point involved.

Our officers are elected by secret ballot after nomination on the open floor. Any man who has been a member of the Association for two years, who is in good standing and present at the meeting is eligible for nomination. We have gone on record emphatically that we prefer this method of choosing our officers. This election is one of the most interesting features of our annual

session and always brings out the largest attendance of the meeting. The question has been raised whether there would be the same snap, the same zest in this election if we were voting for a president who would take office one year later as there is at present when the newly elected president is inducted into office immediately after the election.

Finally, it must be realized that any such plan involves radical changes in our Constitution. These changes would take time to carry out. Under Article X of the Constitution, amendments require a two-thirds vote of the delegates registered at the meeting, provided that the amendments shall have been presented in open meeting at the previous annual session, and that they shall have been sent officially to each component county society at least two months before the session at which final action is to be taken.

In other words, should the Association desire such a change it would have to be presented at the Sarasota meeting in 1932 and then could not come up for final consideration until the annual session of 1933. If at that time it were adopted, we should have to elect then both a president for the ensuing year and a president-elect for the year after.

This question has been thus presented because it seems worthy of careful consideration and because many of our members are in favor of its adoption.

BONE AND JOINT EMERGENCIES

Diseases and injuries of the abdomen which require prompt surgical intervention are generally recognized early and treated accordingly. In contrast, those diseases and injuries of the bones and joints which present emergencies, are often not recognized as such and, in the treatment, temporization seems to be the rule rather than the exception.

Most notable in this group is acute osteomyelitis. The percentage of deaths from this disease is far too high and the period of disability following delayed treatment is appalling. Dr. Urban Maes in a recent editorial stated that, on his service at Charity Hospital, New Orleans, La., "four patients were under treatment at the same time whose combined disability, thanks to the kind of treatment they had received initially, totalled exactly 100 years."

Occurring most commonly in children, acute osteomyelitis is a blood-borne disease which may

follow a slight skin infection or develop from a focus of infection somewhere in the body. The chief cause of error in diagnosis is a failure to keep the disease in mind. Localized pain near a joint followed by a chill with a moderately high temperature is the usual syndrome. The X-ray examination at this stage is negative. Confusion may be avoided by careful manipulation of the neighboring joint. This can usually be done without pain but constant pressure over the bone itself often cannot be tolerated by the patient. One should not wait for X-ray diagnosis of bone infection before operating. In the early cases make skin incisions over the point of greatest tenderness and a few drill holes into the cancellous bone of the shaft if indicated. This simple procedure may suffice to bring about a cure; while even a short delay may necessitate one or many drastic operations followed by years of treatment.

Among the injuries of the bones and joints which demand prompt surgical treatment none are more important than compound fractures and joint wounds. Severe compound fractures and badly lacerated joint wounds, especially those containing foreign bodies, require prompt debridement. Many of these wounds may be closed loosely by interrupted sutures with the result that prompt healing takes place and the number of hospital days is materially lessened. In spite of the lessons learned from emergency surgery in the World War there is still a tendency to treat these injuries by the simple application of some antiseptic and a sterile dressing. As a result it is not uncommon, even in present day civil practice to see gas infection, infected fractures, osteomyelitis and joint infections followed by ankylosis. The records of the Duval County Hospital, Jacksonville, show that during the years 1928, '29, '30 no case treated by prompt debridement and closure developed any of these complications while in the few cases treated by the simple application of a sterile dressing there were two cases of gas gangrene with one death and three cases of osteomyelitis.

Fractures about the elbow more than any other joint constitute another group in which permanent disability with impairment of function is a frequent result. Disability not uncommonly follows expert management but many times it is due to a failure to treat these cases as emergencies. Immediate accurate reduction of the common supracondylar fracture of the

lower end of the humerus with the forearm in acute flexion gives the best result and will prevent swelling. However, it often happens that swelling sets in shortly after the injury is received. The tendency in these cases is to apply an ice bag and wait for the swelling to go down. Even in this stage accurate closed reduction, though difficult, will remove the pressure of the upper fragment from the blood vessels in the bend of the elbow, and congestion and edema will rapidly disappear. After 24 to 48 hours an accurate closed reduction is extremely difficult and an open operation is usually necessary.

CORRESPONDENCE

The House of Delegates is a very important component of the Association. It has the power to change or amend our constitution or by-laws. It elects our representatives to the American Medical Association, issues charters to county societies, divides the State into councilor districts, appoints committees for whatever purposes it sees fit, and is, in general, the legislative and business body in our Association.

At every annual session, many questions are brought before it for consideration and action. It frequently happens that the individual members of this body are called upon to vote on matters which have only been brought to their attention a few moments before. Under such circumstances, careful consideration and thoughtful study of the problem is, to say the least, extremely difficult. Decisions may be made which a calm second judgment, later on, would not support.

The Journal feels that it would be of advantage if some of the questions which might be brought before the House of Delegates at the Sarasota meeting could be presented from time to time in its pages for consideration. In this way the subjects would be brought to the attention of all members of the Association, and not limited simply to that minority of our membership which attends the state meeting. Discussions between individual members and on the floors of the various county societies would go far toward crystalizing the sentiment of the membership on the questions involved and would also enable the individual delegates to vote more intelligently when these questions were considered at the annual session.

With this thought in mind, this issue carries an editorial entitled "Shall we have a President-Elect?" It is hoped that all members will read

this article carefully. The Journal invites comments upon this plan from its readers. Letters received are to be published, in full if space permits.

By frank open discussions in the pages of the Journal of this and other matters, we hope that our Association may approach more nearly that uniformity of thought which is so desirable, and that the House of Delegates may be helped at the meeting in Sarasota in their task of forwarding the affairs of the Association.

So please send in your comments in time for the July issue.

CHIROPRACTIC IN DELAWARE

The Health Department of each state is set up as the highest tribunal on health matters in its respective state. Any legislation which tends to lessen or undermine its powers are in direct conflict with the better judgment of the majority. This is so aptly stated by Governor Buck of Delaware, who recently vetoed a bill to create a Board of Chiropractic Examiners and to regulate the practice of chiropractic, that it is well worth repetition. In vetoing the bill, his statement for so doing is as follows:

"The purpose of the act, as I understand it, is to legalize the practice of chiropractic in this state. Practitioners of this cult are not recognized now. Do they profess to be doctors in the same sense of the term as is commonly understood to apply to men and women of the medical profession? Insofar as I am able to determine, there is not a recognized medical school in the country that includes in its curriculum a course in chiropractic. This fact in itself seems singularly significant.

"Even to the lay mind the idea that all disease of whatever character is due to spinal displacements of a mild sort, and that cures of such ailments as tuberculosis, smallpox, diphtheria, scarlet fever and others can be effected by manipulation and fingering of the spine is preposterous.

"Before returning this bill to you, I have satisfied myself that the training and education a chiropractor, or drugless healer, needs to practice his art does not fit him properly to advisedly treat the sick, inasmuch as he is not qualified to diagnose ailments nor recognize communicable diseases and to take measures to control them. He is therefore an opponent to the department of health.

"Wherefore, it seems to me it would be incon-

sistent for the legislature to appropriate, as it will do, money for the state board of health, which board is trying to eradicate communicable diseases, and at the same time legalize the practice of a cult which does not believe in the germ theory of a disease but does teach and believe that such diseases as scarlet fever, etc., are due to a distracted vertebra and the method to prevent and cure such disease is to see that everybody has a normal spine."

STATE NEWS ITEMS

Those of our Association taking part in the program of the Florida Council on Health, Welfare and Education recently were: Drs. T. Z. Cason, F. A. Brink, Paul Eaton, Henry Hanson, S. R. Norris and Stewart Thompson of Jacksonville. The meeting was called by Governor Doyle E. Carlton and President John J. Tigert of the University of Florida.

* * *

Dr. Jack Halton, Sarasota, attended the American Proctologic Society and the A. M. A. during the early part of June. He also visited Dr. Terrell of Richmond, Va., Dr. Collier F. Martin of Philadelphia and spent some time at the New York Eye and Ear Infirmary, having been away considerably over a month.

* * *

Dr. and Mrs. B. F. Woolsey of Jacksonville have just returned from a trip to Atlanta. Dr. Woolsey attended the annual meeting of the American Urological Association held in Memphis, Tennessee, May 19-23. They report a fine trip.

* * *

Dr. Nelson M. Black, Miami, attended the annual meeting of the American Ophthalmological Society at Asheville, N. C., the early part of June.

* * *

Dr. Louis Orr of Orlando attended the convention of the American Urological Association held in Memphis, Tennessee, recently.

* * *

Dr. J. Ralston Wells, president of the Florida East Coast Medical Society, was recently a visitor in Jacksonville and attended the regular meeting of the Duval County Medical Society, Tuesday, June 2nd, at the Mayflower Hotel. Dr. Wells made a brief statement relative to the East Coast Society, urging the attendance of the Duval County Society members at the coming meeting this fall in Jacksonville.

Dr. C. J. Collins, treasurer of the Orange County Medical Society, who has been seriously ill, is improving rapidly and hopes to be in his office again soon.

* * *

Dr. R. W. Blackmar, Jacksonville, attended the annual convention of the American Urological Association held in Memphis, May 19-23.

* * *

The newly appointed Executive Committee actively got under way immediately after the appointments were made by President Edwards. The first meeting was held at the San Juan Hotel, Wednesday, May 13th, at 2 p. m., every member being present. Stewart Thompson was reappointed as business manager. The second meeting was held in Orlando, Saturday, May 23rd, at 6:30 p. m. Those present were: Dr. Gerry R. Holden, chairman; Dr. M. J. Flipse, Dr. Wm. H. Spiers, Dr. G. H. Edwards, Dr. Shaler Richardson and Dr. Stewart Thompson. A working budget for the ensuing year was approved, many items of new business discussed and enthusiastic plans made for the committee's activities during the ensuing year. A number of recommendations were thoroughly discussed and approved for presentation to the House of Delegates at the Sarasota meeting.

* * *

Dr. George M. Dawson of West Palm Beach and Miss Cora Babcock were married March 3, 1931, at Coconut Grove, Miami. Dr. Dawson is secretary of the Palm Beach County Medical Society.

* * *

The Inter-State Post-Graduate Medical Association of North America will hold its annual meeting at Milwaukee, Wisconsin, October 19-23, 1931. A very interesting program has been prepared with prominent speakers on surgery, orthopedics, medicine, urology, neurology and psychiatry, otorhinolaryngology, ophthalmology, dermatology, radiology, obstetrics and gynecology and pediatrics.

* * *

Dr. T. S. Adams of Jacksonville will be president of the next Jacksonville City Council. He was pledged the office recently at a caucus of the Democratic nominees for Council seats. Dr. Adams led all candidates for councilor at large in the recent primary election.

* * *

Anti-Mosquito Campaign gets official okeh. The Secretary of War concurs in Senator Duncan

U. Fletcher's suggestion that the War Department cooperate with the United States Public Health Service in the extermination of the mosquito nuisance at Fort Dade and DeSoto and continuous area under the exclusive jurisdiction of the health department. The statement was made relative to the Anti-Mosquito Campaign being conducted at St. Petersburg.

* * *

Dr. Clarence T. Skipper, well known physician and surgeon of Jacksonville, died at his home after an illness of a few days.

* * *

The state enabling act in connection with county health units, fostered by the State Board of Health and with the cooperation of many official and independent organizations in the state of Florida became a law as the Governor's signature was affixed. This new law which has just been written into the statutes of the state of Florida will make possible in the various counties of the state definite protection of their citizens and is a commendable step in the progress of preventive medicine and protection in Florida.

* * *

Tables were prepared to accommodate 310 at the banquet held Tuesday night during the Fifty-Eighth Annual Convention of the Florida Medical Association. Checking the number of tickets sold and allowing for a large number of unexpected arrivals led the banquet committee to presume that the banquet hall would be ample to accommodate all. However, the last minute rush was overwhelming and many had to be turned away for lack of room. Dr. G. H. Edwards, general chairman, wishes to announce that unused tickets will be redeemed if forwarded to him immediately at 227 N. Eola Drive, Orlando.

* * *

A case containing surgical instruments was left in Orlando during the Fifty-Eighth Annual Convention of the Florida Medical Association in May. If the owner of these surgical instruments will notify the Association, Box 81, Jacksonville, they may be claimed.

* * *

Dr. Roy J. Holmes, Miami, attended the Urological Convention in Memphis last month.

* * *

The staff of the Orange General Hospital, Orlando, appropriated \$50.00 as usual for prizes for the three best equipped nurses graduating from the training school this year.

Dr. G. H. Edwards, as one of the delegates from Florida, attended the A. M. A. in Philadelphia where he sat on the Credentials Committee. Following the convention, he went to New York City and Boston for some special work.

* * *

Dr. and Mrs. E. C. Swift of Jacksonville announce the arrival of a daughter, born May 6th.

* * *

Dr. and Mrs. Corren P. Youmans of Miami announce the birth of a daughter, Alice Jean Youmans, at Jackson Memorial Hospital on April 14, 1931.

* * *

Dr. and Mrs. Samuel Fletcher Elder of Coral Gables announce the birth of a daughter, Peggy Anne Elder, at Miami General Hospital, on April 4, 1931.

* * *

Dr. L. C. Ingram of Orlando spent the week before the A. M. A. in Philadelphia in special work and following the convention went to New York City for further work in his special line.

* * *

The following communication has been received from the Missouri State Medical Association and is worthy of the notice of our membership:

BEWARE THIS SOLICITOR

On February 23, this year, a solicitor victimized a number of physicians in St. Joseph. His plan was to solicit subscriptions to Harpers and other magazines and to offer sets of books as premiums. The subscription blank called for the payment of \$9.70 in ninety days. He was supplied with blanks, samples of binding and everything to indicate that he was a bona fide magazine salesman.

After he had secured the signature on the subscription blank, he explained in an indifferent manner that if the subscriber cared to pay cash, or by check, there was a discount of \$1.00, and the check could be made payable to "Harper Brothers Publishing Co.," the name printed on the subscription blank. The doctors "fell for it" and the next day he cashed the checks at a local bank and departed. He used the name T. T.

McLean while here but has also used the name Leroy Dale.

Correspondence with the National Publishers' Association, 15 West 37th St., New York, indicates that this person has been defrauding physicians in the Middle West for several months.

* * *

Dr. Bundy Allen of Tampa attended the American Medical Association convention in Philadelphia as one of the official delegates from Florida.

* * *

The following song may have played a large part in the carrying of the 1932 Association meeting to Sarasota. It was written and sung to the tune of "Mandalay" by Dr. Jack Halton, who makes no apologies to Kipling:

On the Bay at Sarasota,
Near the Gulf of Mexico,
You will find the things that please you
And we want you all to go
Where the wind is in the palm trees
And the tarpon's in the Bay.
That's the place for you in '32,
Oh, you must not say us nay,
No, you cannot stay away!

Sarasota on the Bay
Is a dandy place to play;
You can see the tarpon leaping
From Rangoon to Mandalay.
Sarasota on the Bay,
Where in '32 we'll play,
There will be no sleep on the briny deep
And you'll hate to go away!

* * *

The following letter has just been received:
"The Southern Pediatric Seminar has seven scholarships to award to men in Florida. I wish you would recommend seven men and get it before the men generally so that we can select good material."

Members of the Florida Medical Association who are interested should immediately write the Editor of the Journal, Box 81, Jacksonville.

* * *

Dr. W. M. Shaw of Jacksonville recently attended the A. M. A. convention in Philadelphia.

WOMAN'S AUXILIARY

TO THE

FLORIDA MEDICAL ASSOCIATION, INC.

State Editor

Mrs. EDWARD JELKS,
2244 St. Johns Avenue
Jacksonville

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Mrs. LEIGH F. ROBINSON, President-elect Ft. Lauderdale
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PRESIDENT'S MESSAGE

The idea of a Woman's Medical Auxiliary was conceived in Texas while Dr. E. H. Carey of Dallas was President of their State Association. It was carried before the American Medical Association and approved, and a liaison committee, composed of some of the most distinguished members of the medical profession, was appointed to guide the organization in its policies.

Dr. Carey was introduced to the Southern Auxiliary at Louisville last November as the "father of the Medical Auxiliary idea," and his address impressed us with the fact that there was a responsibility on us as doctors' wives and that there was a value to the public and particularly to our husbands, in the work we might do as an organization.

The Woman's Auxiliary to the American Medical Association is only in its ninth year, yet it is composed of thirty-six state auxiliaries with a membership of about 15,000.

The Auxiliary to the Southern Medical Association is in its eighth year, while that of our own state is only six years old.

In launching any new endeavor many problems and difficulties are encountered. We cannot too highly estimate the value of what has been done in so splendidly laying the foundation of the work upon which we hope to continue to build.

We are very anxious for two things during this year: first, more county auxiliaries, and second, more constructive work in our organizations.

Joining and taking an active part in the Medical Auxiliary could very well be ranked as the first activity which any physician's wife should assume outside her home. Through the organization she acquires a certain professional consciousness which renders her alert to help create and maintain the standards of preventive and curative medicine.

The immediate welfare of physicians and their families and the future of medical practice depend upon what the public thinks and does with regard to medical practice and health activities. The busy physician has little opportunity for contact with the well members of society, but his wife has numerous contacts, and so she can promote interest in programs vitally concerning public health, yet how many women are going to interest themselves in furthering the ideals of an organization to which they do not belong?

And just here let me stress the point that our activities in any public way are to be under the direction of the medical society, either state or county, of which we are the auxiliary.

One of the favorite forms by which quackery propagates itself is through lectures offered to women's clubs and other lay organizations. With capable physicians' wives in charge of the health departments of the various clubs, they could eliminate faddists as club speakers and find dates for speakers recommended by the profession. Lay education of this sort will destroy the cults faster than any laws.

The one request the American Medical Association makes of the State and County Auxiliaries is that they push the sale and use of Hygeia. This health magazine deals with simple but fundamental health rules for ordinary living, and helps to safeguard against cults and ignorance.

One of the ideas in organizing is to promote closer social contact between the families of physicians. Social gatherings have not only resulted in better acquaintance and greater friendship among physicians and their families, but have increased the solidarity of the profession.

The required activities of a Medical Auxiliary are not burdensome and will not make great demands upon the time of the individual members. The physician's wife is generally already active in most of the local clubs and organizations, so instead of an increase of duties and responsibil-

ities, it merely means a coordination of these enterprises, the proper conduct of which is so vital to her husband's success, to the future of the profession, and to the welfare of the community.

Will you not please write for the folder on "Organization" and join us in developing this work which stands to uphold the ideas and ideals of the noblest of all professions?

ETHEL JONES DRISKELL.

* * *

NOTES

An Auxiliary to the DeSoto-Hardee-Highlands County Medical Society was organized on the evening of April 14, at Wauchula, where the members of both organizations had dinner together. Mrs. J. R. Wells motored over from Daytona Beach, with Mrs. J. E. Taylor, in order to help DeSoto-Hardee-Highlands County organize. A most enthusiastic meeting was held and the following officers were elected: President, Mrs. M. C. Kayton; vice-president, Mrs. G. S. McKnight; secretary-treasurer, Mrs. L. W. Martin. We welcome most heartily this new organization and hope to hear frequently from its publicity chairman, Mrs. John A. Simmons of Arcadia.

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COUNTY SOCIETY	SECRETARY	MEETINGS				Dues Paid.
		Date	Time	Place	Luncheon?	
Alachua	J. E. Maines, Jr., M.D., Gainesville.	2nd Tuesday	12:00 Noon	White House	Yes.	73%
Bay	D. M. Adams, M.D., Panama City.					100%
Brevard	I. K. Hicks, M.D., Melbourne.	3rd Tuesday		Varies		78%
Broward	Anna A. Darrow, M.D., Ft. Lauderdale.	2nd Tuesday	8:00 P.M.	Chamber of Com- merce	No.	100%
Columbia.....	T. H. Bates, M.D., Lake City.	1st Monday.	7:30 P.M.	Blanche Hotel		71%
Dade	Jos. S. Stewart, Jr., M.D., Miami.	1st Friday	8:30 P.M.	Club Room, Huntington Bldg.	Occasionally.	50%
DeSoto-Hardee- Highlands ...	L. W. Martin, M.D., Sebring.		8:00 P.M.	Varies	Yes.	94%
Duval	Kenneth A. Morris, M.D., Jacksonville.	1st Tuesday	8:15 P.M.	Chamber of Com- merce Building	No.	77%
Escambia	J. M. Hoffman, M.D., Pensacola.	1st Tuesday	8:00 P.M.	Board of Health Building	No.	68%
Hamilton	J. R. Bruce, M.D., Jasper.					
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Washington- Holmes						

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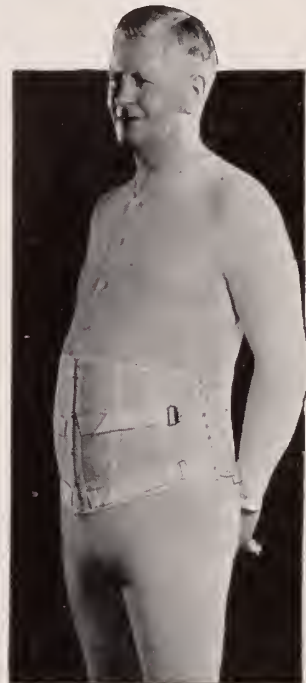
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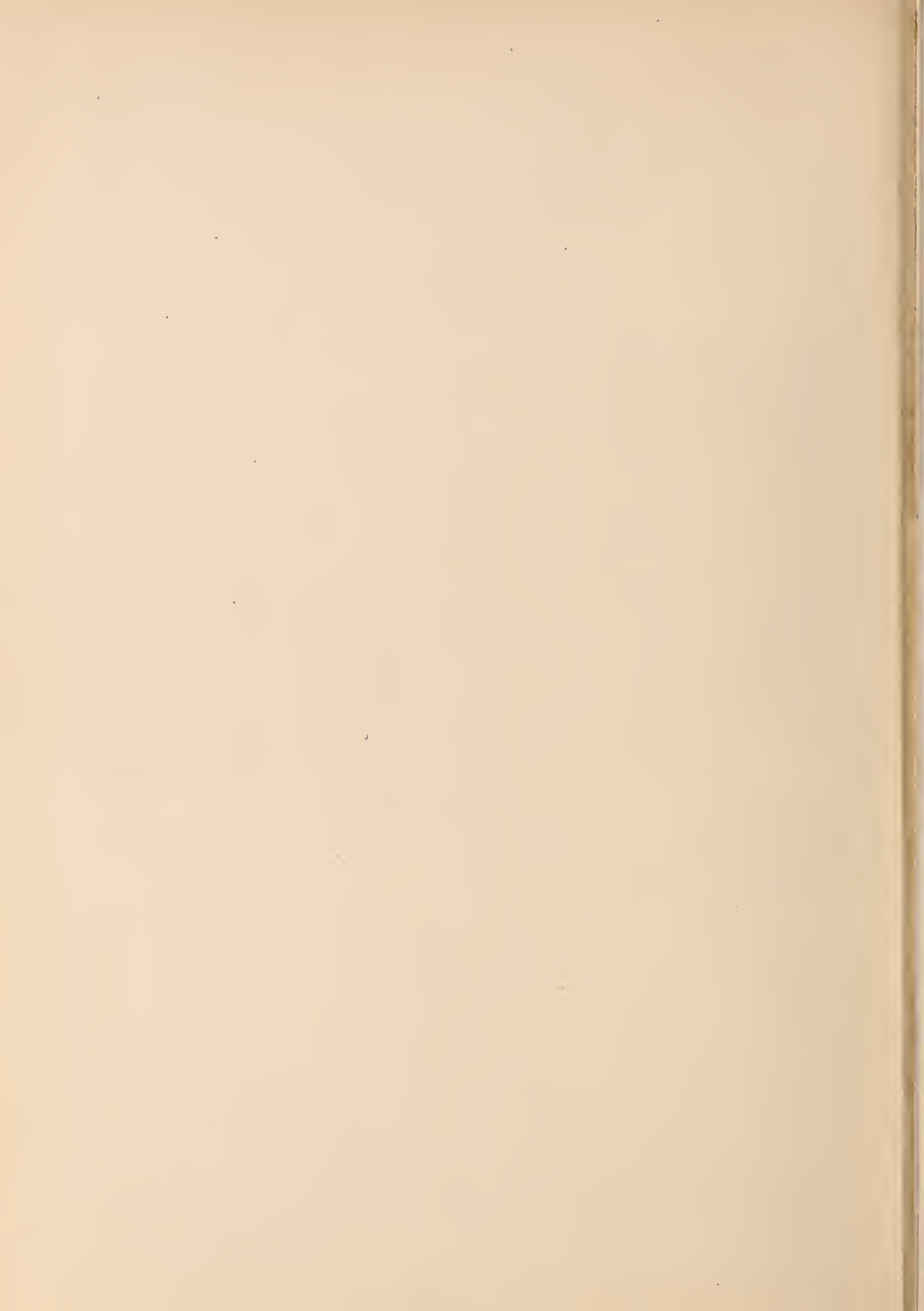
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